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ABSTRACT

This project report outlines the entry-level competencies required for student success in 13 vocational programs at Pensacola Junior College: Accounting Technician; Computer Programming/Operations; Core Program--Major Appliances, Air Conditioning and Heating, Maintenance Technology, and Industrial Electricity; Cosmetology; Dental Hygiene; Executive Secretarial; General Clerical; Import Auto Mechanics; Legal Secretary; Medical Secretary; Office Management and Supervision; Stenographic-Secretarial; and Supermarket Cashiering. The objectives of the project were to establish minimal, rather than optimal, entry criteria suitable to non-selective admission programs, and to eliminate the inconsistent and intuitive imposition of entry competencies based on informal teacher assumptions. The objectives of each of the vocational programs are outlined along with a graphical presentation of (1) the entry-level competencies for each program, (2) the rationale for each of the competencies, (3) an explanation of how the competency relates to the program and/or vocation, and (4) an explanation of how the student will be evaluated for each competence. The report then refers to a computerized reading level analysis that can be used to establish entry-level reading competencies. It is emphasized that these competencies have been developed to meet the requirements of Pensacola Junior College and should not be superimposed on another school's program. (Author/JP)

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ED178133

A REPORT FOR THE ENTRY-LEVEL COMPETENCY PROJECT FOR SELECTED VOCATIONAL PROGRAMS 1978-79

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Pensacola, Florida 32504

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PROJECT OBJECTIVE

The objective of the Entry-Level Competence Project is to provide students and counselors with information describing the minimum prerequisite skills and competencies required for the student to achieve success in selected vocational programs.

Every student enters a vocational program possessing a set of skills and behaviors. His/her success in the program is dependent upon four factors:

1. The kind of skills and competencies possessed.
2. The degree to which these skills are developed.
3. The relationship of the skills to the program tasks.
4. The students' psychological compatibility with program objectives.

Historically, the student's skills and competencies have received peculiar attention. In selective admissions programs, the types of skills and levels of competencies have been established with two purposes in mind.

1. The skill and competence level is selected to produce the highest predictability of success regardless of whether the particular skills are needed.

2. The skill and competence level is selected to produce a distribution among the applicants. A ranking is thereby produced which facilitates a selection process.

Thus, selective admission criteria frequently do not relate to the minimum competence required for success.

In programs which are not "selective admission," the students' competencies are most commonly an assumption made by the teacher. The assumptions are, of course, based on the teacher's experience, but the assumptions usually are:

Non-Verbalized: The teacher has difficulty in stating precisely what they are.

Inconsistent: Several teachers of the same program do not necessarily agree.

Intuitive: The competencies are "felt" rather than experimentally determined.

Uncommunicated: The expected competencies are not communicated.

Thus, the student is unaware of what he/she should know. The teacher is unaware of what the student does know.

For the past several years, strong emphases have been placed upon defining behaviorally the end-of-program objectives. But little attention has been directed toward identifying the entry-level competencies--the competencies one must have to profit maximally from the instruction. A grant from the Division of Community Colleges of the Florida State Department of Education has permitted us at the Pensacola Junior College to define the entry-level competencies for several vocational programs.

We have set as our goal a brief, succinct presentation of the entry-level competencies. Each program follows the same format. Each competence is addressed with the same four questions:

1. Competency: What should the student know in order to have a successful learning experience?

2. Rationale: Why is the entry-level competence needed?

3. Program Competence: How is this competence related to the program and/or world of work?

4. Evaluation: How will the student be tested to indicate he/she has reached the competence desired?

We must emphasize that these entry-level competencies are developed from the program requirements at Pensacola Junior College. They should not be superimposed upon another school's program. They may be appropriate, but the determination should be made only after a careful study of one's own program.

Noojin Walker
Vice President for Academic Affairs
Pensacola Junior College

PROJECT MEMBERSHIP

	Program
John Burns	Core Program
Charles Colgan	General Clerical
L. Wayne Horn	Computer Programming/Operations
Arthur Hyland, Jr.	Import Auto Mechanics
Richard Irvine	Accounting Technician
Patrick Losee	Core Program
Stan Lowery	Core Program
Lilliam C. McLean	Supermarket Cashiering
Janet Martin	Executive Secretary/Stenographic-Secretarial
Judith Resch	Executive Secretary/Stenographic-Secretarial
Jean K. Ross	Office Management and Supervision
Diane S. Sutton	Medical Secretary
Patricia Trachy	Executive Secretary/Stenographic-Secretarial
Muriel B. Warren	Legal Secretary
Katie Yates	Cosmetology
Joan Ziel	Dental Hygiene
Richard Bedics	Project Coordinator

ACCOUNTING TECHNICIAN

This one-year program is designed to provide the education and skill development to prepare the student for an accounting position at the entry level, as a bookkeeper, junior accountant, or accounting clerk for a private business, governmental agency, or public accounting firm. The knowledge and training acquired in this program can also be applied to many other managerial or supervisory positions in business and government. A student who completes the basic program is awarded a Certificate of Occupational Proficiency and can begin employment at that time. The associate of science degree may be earned by completing certain specified college courses. The student can then transfer to certain universities, such as the University of West Florida, and work toward a bachelor's degree. During the last term of the basic program, the student will intern for six weeks in an accounting office in the Pensacola area under the direction of the program coordinator and the participating employer.

ACCOUNTING TECHNOLOGY — CERTIFICATE-A.S.

Term I

ACC 0201	Accounting I	4 cr.
MTB 0102	Business Math	5
SES 0108	Business Machines	3
SES 0101	Typewriting	4
COM 0101	Bus. Vocab. & Spell	5
COC 0101	Data Processing	4

Term II

ACC 0202	Accounting II	4 cr.
ACC 0205	Income Tax	4
COM 0102	English for Busn.	5
BAN 0101	Business Prin.	5
MAN 0105	Human Relations	4
ACC 0204	Gov. Accounting	4

Term IIIA

ACC 0203	Accounting III	4 cr.
BUL 0101	Business Law	4
COM 0103	Bus. Writing	5

Term IIIB

ACC 0206	Accounting Practice Set	3 cr.
ACC 0207	Work Experience	3
ACC 0208	Cost Accounting	4

A Certificate of Occupational Proficiency is earned upon completion of the above program.

The Associate of Science in Accounting Technology may be earned by acquiring additional credits in collegiate level courses.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
General Learning Ability	The student needs the ability to "catch on" or understand instructions and underlying principles and the ability to reason and make judgements.	This ability is closely related to doing well in coursework. The student must be able to comprehend oral and written instructions to perform various job tasks.	In process of selecting test to be used.
Verbal Aptitude	The student needs to understand the meanings of words and to use them effectively; the student needs the ability to comprehend language, to understand relationships between words and to understand meanings of whole sentences and paragraphs.	Reading levels of Accounting textbooks in current use range from Grade 12.0 to Grade 16.9. The student must be able to accurately follow the oral instructions of supervisors and the technical written instructions of job task manuals, various tax return forms, etc.	Score of at least 10th grade level on California Achievement Test (CAT) Vocabulary section and Reading section.
Numerical Aptitude	The student should be able to add, subtract, multiply, and divide whole numbers, fractions, and decimals.	Arithmetic functions permeate all phases of accounting work. A mastery of basic math skills is absolutely vital to succeed in this field.	Score of at least 8th grade level on California Achievement Test Arithmetic section.

PENSACOLA JUNIOR COLLEGE ACCOUNTING TECHNICIAN RICHARD IRVINE

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Spatial Aptitude	The student needs the ability to think visually of geometric forms and to comprehend the two-dimensional objects; the student needs the ability to recognize the relationships resulting from the movement of objects in space.	Accountants constantly deal with abstract ideas, e.g. depreciation; amortization; allocations; accruals and deferrals; and local, state, and federal tax laws.	In process of selecting test to be used.
Form Perception	The student needs the ability to perceive pertinent detail in objects or in pictorial or graphic material; the student needs the ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines.	The accountant must be able to interpret information presented in graphic or tabular form and to rapidly make comparisons and discern differences in data presentations. The student must be able to develop a rapid eye/thought skill to perform these tasks at a satisfactory speed.	In process of selecting test to be used.
Clerical Perception	The student needs the ability to perceive detail in verbal or tabular material, to observe differences in copy, to proofread words and numbers, and to avoid perceptual errors in arithmetic computation.	As in Form Perception, the successful account clerk should be able to develop with experience a rapid eye perception in order to develop satisfactory speed at job tasks such as proofreading financial statements and tax returns before submission to clients or management and (continued)	In process of selecting test to be used.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Clerical Perception (continued)		making comparisons of figures between various records.	
Motor Coordination	The student needs the ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed and the ability to make a movement response accurately and swiftly.	Eye/hand coordination and good familiarity with pencil are basic to accounting work. Accountants must also be able to rapidly telegraph visual data to the hands for operation of calculators, adders, typewriters, and other office equipment.	In process of selecting test to be used.
Finger Dexterity	The student needs the ability to move the fingers and manipulate small objects with the fingers rapidly and accurately.	The program includes instruction in the use of various office machines, including typewriters, calculators, 10-key adders, bookkeeping machines, and others. The account clerk must demonstrate proficient use of all types of office equipment, especially the 10-key adder.	In process of selecting test to be used.

PENSACOLA JUNIOR COLLEGE | ACCOUNTING TECHNICIAN | RICHARD IRVINE

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Manual Dexterity	The student needs the ability to move the hands easily and skillfully and the ability to work with the hands in placing and turning motions.	As stated in Motor Coordination and Finger Desterity, the accounting student and worker must achieve a satisfactory level of performance with various office machines, using them with a high degree of accuracy and a reasonable level of speed. Good eye/hand coordination is essential to career success.	In process of selecting test to be used.
Psychological Disposition	The student should possess a pleasant personality, good social skills, and a propensity for working indoors. The student also needs a logical, organized thinking process and a willingness to see that assigned job tasks are completed in a thorough and accurate manner.	The accounting worker normally works in office spaces (sometimes cramped) in conjunction with and in close proximity to other accountants and office personnel. Oral communication of accounting information should be done in a harmonious, non-abrasive manner. The processing of accounting data must be performed within prescribed procedures to provide management with reliable information; sloppy and incomplete accounting can result in poor decision-making by management.	Interview by program coordinator.

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Physical Requirements	The student should be able to make effective oral communication, to hear verbal communication or be able to read lips, to be able to walk about, to have good use of at least one arm and hand, and to see with at least one eye.	The accounting student/worker cannot possibly function without the aid of sight. He/she needs the ability to receive verbal communication from instructors and job supervisors and to reciprocate with understandable oral communication of his/her own. The accounting worker must be able to easily move about congested office spaces. The accountant must have use of one arm and hand for the operation of adding machines and other office equipment.	Interview by program coordinator

COMPUTER SCIENCE

The two-year associate degree program in computer science prepares the graduate to function at the job entry level as a computer programmer or computer operator.

As a programmer, the graduate would develop program specifications, write program codes in several languages, test and verify program correctness/completeness, and write program documentation and user instructions.

The duties of a computer operator would include involvement in preventive maintenance of computing equipment, operating equipment such as readers, printers, and drives. He/she would also schedule work in the computing system, and monitor jobs during execution.

COMPUTER SCIENCE (GENERAL) — A.S.

FRESHMAN YEAR

Term I			Term II		
GEB 1011	Business	3 cr.	SES 1100	Begin. Typewriting	3 cr.
COC 1300	Computers	3	COP 2110	Fortran	3
ENC 1103	English Comp.	3	ENC 1136	English Comp.	3
ECO 2013	Economics	3	ECO 2023	Economics	3
AMH 1550	U. S. Constitution	1	CNM 2002	Computer Math	3
MAC 1104	Algebra	3	___ ___	Physical Ed	(1)
___ ___	Physical Ed	(1)			15 cr.
		16 cr.			

SOPHOMORE YEAR

Term I			Term II		
COM 2100	Busn. Writing	3 cr.	ACC 2021	Accounting	3 cr.
ACC 2001	Accounting	3	BUL 2112	Business Law	3
BUL 2111	Business Law	3	COP 3540	File Processing	3
COP 2120	Cobol	3	COP 2400	Assembler	3
___ ___	Computer Elective	3	CRM 2030	Computer Operations	3
___ ___	Physical Education	(1)	___ ___	Physical Education	(1)
		15 cr.			15 cr.

The General Computer Science curriculum is designed for the student who expects to seek employment at the end of the sophomore year.

PENSACOLA JUNIOR COLLEGE COMPUTER PROGRAMMING/OPERATIONS L. WAYNE HORN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Problem Solving Ability: Translating word problems into algebraic form.	Problem solving is an essential component to be able to complete required programming assignments.	Computer programming requires the ability to solve problems in a systematic and logical fashion. Computer operations often require the operator to apply his knowledge to solve problems which have never been encountered previously.	In process of selecting test to be used.
Manual Dexterity	Completion of the program requires use of a number of devices including computer terminals and keypunch machines which require manual dexterity.	Computer programming requires the use of the keypunch and/or terminals for the preparation of programs and data. Computer operations requires the ability to manipulate physical equipment for purposes of inserting media, correcting malfunctions, preventive maintenance, etc.	In process of selecting test to be used.
Unaided Physical Mobility	Completion of the computer operations course requires physical mobility at the same level as required of professional computer operators.	Computer installations in which operators work are usually too confined to accommodate persons in wheel chairs. Operators must perform various physical tasks including lifting, climbing, and stooping, which usually would be difficult to be performed by a person using crutches.	Subjective evaluation of student's mobility based on personal interview.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Ability for written expression	In order to write assigned programs and pass class tests, a student must have the ability to express himself in writing standard English.	Computer programming requires the ability to write documentation describing clearly and in detail how to use a program or system and how a program or system functions. Computer operators are required to write detailed descriptions of how systems are executed.	Subjective evaluation of an essay to be written by the student describing operation of any well understood system.
Ability to remember and follow directions	This ability is essential in order to facilitate training in operation of various computer-related devices and to complete required course assignments.	The operation of the computer and related peripherals requires that a person be able to remember and follow both written and oral instructions without undue repetition or errors. Computer operators must follow very detailed instructions regarding the executions of various programs for which they are responsible.	In process of selecting test to be used.
Ability to concentrate on and organize details	This ability is required to facilitate learning the details of programming languages and to write required programs.	Computer programming requires the ability to construct detailed sets of instructions for solving problems. The level of detail with which the programmer must work is exceedingly great; his success in programming will to a certain extent be determined (continued)	In process of selecting test to be used.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
		by his ability to focus on detail and to construct low-level detailed implementations of high-level schema.	In process of selecting test to be used.
Eyesight	All course work and outside assignments require sight.	Computer programming and operations requir the ability to see printed data from the computer and data displayed on CRT screens.	Standard eye chart - standard to be established on advice of physician.
Ability to Read: 11th grade	The average level of reading difficulty of textbooks used in the program is approximately 11th grade.	Computer programming and operating requires the ability to read technical manuals, system specifications, and related material.	11th grade or higher score on reading scale of California Achievement Test
Mathematical Ability: Basic algebra including linear and quadratic equations, logarithms, systems of linear equations, and simplification of polynominals.	Computer Math is required part of the program; it requires mastery of College Algebra.	Algorithms for which programs are written are stated in mathematical terms. Computer programs usually have a substantial mathematical basis. Computer operation requires basic knowledge of data representation and computer arithmetic.	Credit for College Algebra

CORE PROGRAM

Industrial Electricity
Maintenance Technology
Air Conditioning-Heating
Major Appliance Servicing

Certain year-long programs consist of a common core and a specialization component. The core consists of the following courses:

Basic Electricity
Basic Electricity Lab
Wiring Diagrams
Electronics Control Devices
Electronics Contral Devices Lab
Safety

Continuation in the program and progression into the specialization component requires satisfactory performance in these courses. Because they develop skills and knowledge without which program completion is impossible, the level of skill the student brings with him to core component is critical.

Industrial Electricity Program

The Industrial Electricity program is intended to equip individuals with a set of basic knowledge and skills as preparation for entry level employment in the electrical field. Graduates of the program will have a solid foundation of electrical theory and the ability to use common electrical meters and instruments. Also, a basic understanding of physical laws in general.

He/she will have a basic knowledge of some of the major codes and standards used in the electrical industry and the ability to apply them to particular situations.

The graduate will be able to interpret diagrams and prints of the type that are commonly used in the electrical field, and will have a fundamental knowledge of common electrical machinery, equipment, and components.

He/she will be able to communicate effectively both orally and in writing. Also, he/she will have a good understanding of employer and employee responsibilities as they relate to insurance, safety, unions, pensions, etc.

Maintenance Technology Program

The Maintenance Technology program is structured to prepare a graduate to enter the field of general equipment maintenance. An understanding of building

trades, especially roofing, carpentry, plumbing, sheetmetal work, and electricity is developed. The use of hand and power tools, soldering and brazing, nails, screws and bolts as well as reading blueprints of buildings, technical equipment manuals, and public relations is stressed. Graduates are generally employed by industry, apartment complexes, or condominiums wherein maintenance involves domestic appliances, electrical and air conditioning equipment, and building trades.

Air Conditioning, Heating, and Refrigeration Program

The program in Air Conditioning-Heating is structured to prepare persons for initial employment in the air conditioning and heating mechanics field, domestic and commercial.

The graduate will be able to use test instruments to measure the various quantities in an electrical circuit, and to recognize the schematic symbols for the electrical components used on air conditioning equipment.

He/she will be able to use pressure charts and measuring equipment to analyze refrigerant systems and to analyze control systems for operation and repair.

He/she will have a general math skill and be able to communicate effectively with customers and co-workers. The graduate will be able to read and interpret technical manuals and be able to communicate with others both orally and in writing.

Major Appliance Servicing Program

The Major Appliance Servicing program is designed to prepare the student to meet the entry level skills of employment in appliance servicing. The student will become proficient in the installation, servicing, and repair of air conditioners, refrigerators, washers, and other major appliances using hand tools and test equipment, following wiring diagrams, manufacturers' specifications, and local and national codes. The student will observe and listen to appliances during operation to detect malfunctions and will disassemble and examine mechanical and electrical parts. The student will replace or repair worn or defective components and make adjustments and calibrations of devices and components. Emphasis will be put on customer relations, serviceman attitudes, personal hygiene, dress, and business functions.

INDUSTRIAL ELECTRICITY — CERTIFICATE-A.S.

Term I

MAP 0101	Applied Math I	5 cr.
ELE 0101	Basic Electricity	4
ELE 0102	Basic Elec. Lab.	2
ELE 0103	Residential Wiring	4
ELE 0104	Blueprint Reading	2
ELE 0105	Schem&Wiring Dia.	4
OCS 0101	Occupational Safety	2

Term II

ELE 0201	3-Phase Circuits	4 cr.
ELE 0202	3-Phase Circuits Lab	2
ELE 0203	Commercial Wiring	4
PHY 0101	Applied Physice I	5
___ ___	Elective	2
INR 0102	Industrial Relations	3

Term III

ELE 0301	Electronic Con. Devices	4 cr.
ELE 0302	Elec. Con. Devices Lab	1
ELE 0303	Motor Control	4
ELE 0304	Motor Control Lab	1
ELE 0305	Electric Machinery	4
ELE 0306	Electric Machinery Lab	1
ENC 0101	Communication Skills	3

A Certificate of Occupational Proficiency is granted after successful completion of the program above. Upon completion of additional collegiate level credits, the student will be granted an Associate of Science in Industrial Electricity.

PENSACOLA JUNIOR COLLEGE

BEGINNING LEVEL

CORE PROGRAM: Major Appliances; Air Conditioning and Heating; Maintenance Technology; Industrial Electricity

JOHN BURNS
PATRICK LOSEE
STAN LOWERY

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Reading level: 10 - 12 grade	Technical manuals and text books are written at this level.	The preponderance of technical information in the theory courses is acquired by reading.	Pre-test by Counseling
Legible handwriting	Student-instructor communication	Testing, term papers, work orders, employer-employee communication must be readable	Examination or admission paper work
Verbal communication	The student must understand oral instruction and be able to express himself/herself effectively in standard English.	Direct information exchanges occur between students and teachers.	Observation at initial interview
General math	To comprehend instruction, the student must be able to carry out the four basic arithmetical operations with whole numbers.	Usual arithmetic in buying and selling--record keeping	Pre-test
Manual dexterity	Use of hand tools, instruments-meters	The laboratory component requires hand-eye coordination within time constraints.	Observation
Sensory capabilities	The student must have normal or corrected sight and hearing.	Instructions and warnings are frequently spoken. Also, sounds are cues in diagnosing problems.	Interview or physician's statement.
Physical capabilities	Full range of hand and arm motion, and locomotion without crutches or wheelchair.	Certain situations require the use of two hands while one is perched on a ladder.	Interview

COSMETOLOGY

The one-year program in cosmetology prepares the graduate to take the State Board Examination. After successfully passing the Examination, he/she will be qualified for employment in the cosmetic and/or hair industry as a professional team member, demonstrating professional ethics and attitudes.

The graduate will be able to use the proper communication skills to determine the patron's needs for hair and skin care. He/she will be able to execute proper hair and scalp treatments, such as brushing, shampooing, and scalp and hair conditioning. Among the other personal services he/she will be able to provide are hair cutting, permanent waving, chemical straightening, hair coloring, manicuring and pedicuring, skin care, make-up techniques, and eyebrow arching.

COSMETOLOGY — CERTIFICATE-A.S.

Term I

COS	0101	Introduction to Cosmetology	10 cr.
COS	0102	Skills Laboratory	10

Term II

COS 0103	Cosmetology Theory A	8 cr.
COS 0104	Basic Techniques A	8

Term III

COS 0105	Advanced Theory Tech. A.	7 cr.
COS 0106	Customer Relations A	3
COS 0107	Applied Tech. A	10

A Certificate of Occupational Proficiency is earned upon the satisfactory completion of the above three terms. The Associate of Science in Cosmetology may be earned by acquiring additional credits in collegiate general education.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
10th grade reading level	Prentice-Hall Textbook of Cosmetology; Prentice-Hall, Inc., publisher	The student must be able to read and understand the textbooks and manufacturer's directions.	California Achievement Test
To be able to express thoughts clearly in writing	To take written exam which is required in the course	To be able to express oneself on paper when solving test questions, and to be able to write clearly on the state board examination	By filling out application forms for program
Communicate clearly	To communicate with instructor and patron	To be able to express oneself verbally to salon owner or manager, patron, instructor, and co-workers	Personal interview with instructor
Math: 7th-8th grade level. Addition, subtraction, multiplication, and division of whole numbers, including a basic background in fractions and decimals	To keep individual records of hours and services by being able to add and subtract	To add daily sales receipts in order to know earnings. To be able to order supplies and calculate prices. To be able to measure ingredients in mixing chemicals used in their field.	California Achievement Test. 7th-8th grade level on Mathematics Section.

PENSACOLA JUNIOR COLLEGE COSMETOLOGY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Finger Dexterity and Manual Dexterity	To be able to roll hair and control fingers and hands in order to learn techniques of the profession	By applying learned techniques when pin curling, rolling, hair cutting, permanent waving, chemical relaxing, massaging, filing or painting nails, hair coloring and bleaching, and shaping and molding.	Test being developed
Artistic Sense	To be able to determine line, color, and proportion in hair arrangement	To better serve the desire of patron by designing hairstyle or make-up to face shape and body composition	Interview with instructor. Other evaluation being developed.
Form Perception	To make usual evaluations in order to cut, style, apply make-up, arch eyebrows, tint, bleach, and shape nails to the individual	To be able to apply visual evaluation in hair cutting, styling, make-up, arches, tints, bleaches, and shaping the nails during program and in field of work	Being developed
Motor Coordination	Coordination of eyes, hands and fingers in order to cut, wave, curl, apply tint and bleach, and to execute facials, eyebrow arches, and manicure nails	In order to perform salon services such as cutting, waving, curling, tinting, bleaching, facials, eyebrow arching, manicuring on the job and throughout the program	Being developed

PENSACOLA JUNIOR COLLEGE | COSMETOLOGY | KATIE YATES

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Intelligence, understanding, and reasoning	Understanding instructions while learning to perform the various phases of beauty work. To reason and make judgments in assisting patrons.	Understanding, reasoning, and making judgments when assisting patrons to decide which of the various treatments should be applied to fit individual needs. To understand salon rules and regulations set by the state and by salon owners or managers	Being developed
Verbal Aptitude	Ease of expression which is needed for greeting patrons, ascertaining services desired, and explaining hair styles and other services	To express oneself verbally to salon owner or manager, patrons, instructor, and co-workers	Individual interview with instructor. Verbal Aptitude section California Achievement Test, 10th grade
Attitude towards the profession	Attitudes towards hair, chemicals, disorders, working with/on older people, children, different race, opposite sex, and handicapped	To be able to apply learned techniques to all types of people working with chemicals and correcting disorders of the skin and scalp	Individual interview with instructor
Must be United States citizen or have Applied Declaration of Intent	State Board requirement	Students will not be allowed to enter school to learn skills for the work field if this competency is not met	Application form and individual interview with instructor

PENSACOLA JUNIOR COLLEGE | COSMETOLOGY | KATIE YATES

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world or work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
16 years of age upon entry of program	State Board requirement		Application form and individual interview with instructor
Free from eye disorders that result in wearing dark or tinted glasses, or color blindness	To be able to assess true color values in relationship to hair color and toning	To be able to determine the primary and secondary colors in the preparation and application of haircoloring and toning for the patron	Individual interview with instructor. The Ishaihiara test for color blindness.

DENTAL HYGIENE

Upon completion of the two year dental hygiene program, a student is eligible to take a written national board examination as a prerequisite for taking a practical examination in any state to become a registered dental hygienist. As a dental hygienist, he/she must work under the supervision of a dentist in a private dental office, public health facility, hospital or educational institution. Hygienists are trained to scale and polish teeth, expose and develop dental radiographs, provide fluoride treatments, and develop personal oral hygiene instructions on an individual basis for patients. The dental hygienist is trained to become an oral health educator as a member of the dental health team.

DENTAL HYGIENE — A.S.

FRESHMAN YEAR

Term I			Term II		
ENC 1103	English Comp	3 cr	DEH 1600	Periodontia	1 cr.
CHM___	Chemistry	3	DEH 1800	Dental Hygiene	1
DES 1001	Head & Neck Anat	2	DEH 1800L	Hygiene Clinic	4
DES 1002	Tooth Morphology	1	DEH 2120	Histology	2
DEH 1000	Dental Hygiene	2	DEH 2503	Dental Materials	3
DEH 1000L	Clinic	3	DES 1200	Radiology	2
APB 1190	Anatomy & Physiology	3	APB 1170	Microbiology	4
		18 cr			17 cr

Term IIIA

HUN 1001	Nutrition	3 cr.
DEH 1803	Clinic	1
DEH 1505	Expanded Functions	2
		6 cr.

SOPHOMORE YEAR

Term I			Term II		
ENC 1136	English Comp	3 cr	___ ___	*Social Studies	3 cr
DEH 2301	Pharmacology	2	SPC 1300	Speech	3
DEH 2400	Pathology	2	AMH 1550	Constitution	1
DEH 2601	Periodontology	1	PSY___	General Psychology	3
DEH 2712	Dental Health Ed	2	DEH 2701	Dental Health	1
DEH 2804	Dental Hygiene	2	DEH 2806	Dental Hygiene	1
DEH 2804L	Hygiene Clinic	6	DEH 2806L	Hygiene Clinic	6
		18 cr.			18 cr

Continuation in the program from term to term is dependent upon maintaining a 2.0 average for all courses attempted. If a student receives a "W" or "F" in any Dental Hygiene subject, the student will be prohibited from continuation in the program.

*If the student takes a social studies course that includes the Constitution, the student will be exempt from taking AMH 1550 Constitution.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Numerical Ability	Student will be required to deal with quantative data and demonstrate reasoning ability.	Student must successfully complete courses involving an understanding of statistical data, pharmacology, and chemistry. Required in performing computations in dental indices and surveys. Must have a knowledge of addition, subtraction, multiplication, division, use of whole numbers, decimals, fractions, and percents in world of work.	Dental Hygiene Aptitude Test
Science Ability	The student is expected to be familiar with the scientific method to facilitate logical thought process.	The student must have a basic knowledge of science to succeed in Anatomy, Physiology, Microbiology, Biology, and Chemistry	Science-Dental Hygiene Aptitude Test
Verbal Ability	The student must demonstrate good vocabulary usage and facility of expression needed in a technical program. This also includes vocabulary in the specific field of Dental Hygiene.	Ability to relate to patients. Communication skills needed in interpersonal relationships of health professions in dealing with public, patients, colleagues. Student will be expected to use effective communication skills, such as good vocabulary usage, proper diction and speech to express oneself.	Verbal - Dental Hygiene Aptitude Test

PENSACOLA JUNIOR COLLEGE DENTAL HYGIENE PROGRAM JOAN ZIEL

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Reading Comprehension	Student required to demonstrate ability in reading comprehension, recall of fact, synthesis of fact, and deductions.	Prerequisite for comprehension of principles of dental hygiene. Requirement mandatory for success on National Board Exam. Dental Hygiene textbooks are written at a mean grade level of 15.	Reading - Dental Hygiene Aptitude Test
Manual Dexterity	Form perception and spatial aptitude important for eye finger coordination necessary to practice dental hygiene.	Courses requiring wax carvings of human dentition and dental laboratory learning experiences using manual dexterity. A necessary component in mastering the art of cleaning teeth Prerequisite for passing a state board exam for liscensure to practice dental hygiene.	Chalk carving exercise required of all applicants. Maximum score of 5.
High School Graduate or GED	General intelligence is basic to job performance and comprehension of principles of dental hygiene.	Comprehension of dental hygiene curriculum	High school diploma
High School or College Biology	Prerequisite for Microbiology	Student must be familiar with basic vocabulary of biology and medicine.	High school or college transcript

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
High School or College Chemistry	Prerequisite for Dental Materials and laboratory learning experiences related to various chemicals used in oral cavity.	Student required to have a basic science vocabulary. A knowledge of symbols and formulas is necessary for working with various dental materials in the oral cavity.	High school or college transcript.
Professional Attitude	Need to demonstrate commitment to profession of dental hygiene.	Commitment of long-range goals needed for completion of program objectives.	Personal interview to determine attitudes, professional goals, and communication skills.
Physical Aptitude	Student must be physically healthy, free from any physical defect which would prevent person from standing or sitting for long periods of time or from working with both hands.	Student must demonstrate physical stamina needed in a demanding program. Must be able to sit or stand for long periods of time, work with both hands in a small confined area like the oral cavity.	Physical examination written form filled out by a personal physician.
Personal Oral Hygiene Aptitude	Student must practice good personal oral hygiene in order to convince others of the necessity.	Students are expected to be a model for others in demonstrating proper personal oral hygiene procedures.	Complete dental and oral hygiene examination by personal dentist.

EXECUTIVE SECRETARY

The two-year associate of science degree executive secretarial program is designed to prepare the student for work in an office as a stenographer and to increase his/her knowledge and understanding of the business world. The program emphasizes the writing and transcribing of shorthand. Closely related to the transcribing of shorthand is a thorough knowledge of business English. Students completing the program are skilled in typewriting, filing, and office machines and have some knowledge of accounting, business principles, and data processing.

Graduates of this program, with experience and other personal qualifications, may advance to executive secretarial positions in business, government, industry, and education. This executive secretarial program is recommended for those who plan to take the certified professional secretary (CPS) examination.

EXECUTIVE SECRETARY — A.S.

FRESHMAN YEAR

Term I			Term II		
GEB 1011	Intro to Business	3 cr.	SES 1211	Intermediate Shorthand	3 cr.
SES 1110	Intermediate Typewriting	3	SES 1361	Machine Trans.	3
MAN 1012	Records Mgmt	3	COC 1300	Computers	3
ENC 1103	English Comp	3	ENC 1136	English Comp	3
MTB 1103	Busn. Math	3	ECO 1000	Economics	3
___ ___	Physical Educ	(1)	___ ___	Physical Educ	(1)

SOPHOMORE YEAR

Term I			Term II		
ACC 2001	Accounting	3 cr.	MAN 2100	Human Relations	3 cr.
BUL 2111	Business Law	3	COM 2100	Business Communic.	3
SES 2120	Adv. Typewriting	3	___ ___	Humanities	2
SES 2212	Adv. Shorthand	3	AMH 1550	U.S. Constitution	1
SES 1321	Office Machines	3	SES 2402	Office Systems	3
___ ___	Physical Educ	(1)	___ ___	Elective	3
			___ ___	Physical Educ.	(1)

This two-year program is designed for the student who desires full-time employment immediately after graduation.

PENSACOLA JUNIOR COLLEGE — EXECUTIVE SECRETARIAL PROGRAM

JANET MARTIN
JUDITH RESCH
PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
A high degree of interest in secretarial work	Through proper counseling, students who have no interest in the area can be channeled in another direction.	A person must have a high degree of interest in secretarial work in order to be able to succeed in the Executive Secretarial Program.	A high level of interest shown in secretarial work as measured by the Strong-Campbell interest inventory test.
Reading level of 11th grade	The majority of textbooks for the Executive Secretarial Program are written at the 11th grade reading level or higher.	A student must be able to understand what he/she reads.	CAT - Reading Section
Word differentiation--possess ability to construct whole words from a few known letters or symbols	Shorthand is based on symbol writing.	A large number of phrasing devices and special abbreviations are used in shorthand.	CAT - Vocabulary Section
Distinguish between similar-sounding words (e.g. past-passed).	Students should be able to determine from the context of a sentence which of two or more words suggested by a shorthand outline should be used.	This ability is necessary for transcription skill.	CAT - Reading and Vocational Section
Ability to spell commonly used words	Spelling a common vocabulary words is a necessary trait for a good secretary.	Acceptable transcription work must be spelled correctly.	Teacher-constructed test on 25 common words; must be passed with 95 percent accuracy.
Ability to write and understand standard English language.	Students need to understand verbal and written communications.	This understanding is necessary for the accurate production of shorthand transcripts.	CAT - Section 8 - Language Usage and Structure 10th grade level

PENSACOLA JUNIOR COLLEGE — EXECUTIVE SECRETARIAL PROGRAM

JANET MARTIN
JUDITH RESCH
PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Detail Perception	Ability to proofread words and numbers is needed. Skill in perceiving pertinent detail in verbal or tabular material is required. Need to be able to observe differences in copy and avoid perceptual errors in arithmetic copy.	This skill is needed in order to avoid perceptual errors in typewriting, math, and filing.	Have no test to measure yet
Ability to understand instructions and underlying principles	A student needs the ability to reason and make judgments.	This skill is directly related to one's being successful as an executive secretary where independent judgment will be exercised.	CAT - Reading Comprehension 10th grade level
Ability to learn abstract symbols	Shorthand is based on abstract symbols.	This ability is necessary in order to learn symbol shorthand.	Have no test to measure yet
Phonetic Association	Shorthand is recorded by phonetic sounds.	Sounds must be heard in order to be recorded accurately.	Have no test to measure yet
Concentration, listening, and memory skills	A student must be able to listen, retain dictated matter in mind, and write all at the same time.	One must be able to do all three activities simultaneously in order to take dictation successfully.	CAT - Composite Score 10th grade level

PENSACOLA JUNIOR COLLEGE | EXECUTIVE SECRETARIAL PROGRAM | JANET MARTIN, JUDITH RESCH, PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Manual Dexterity	Manual dexterity is highly correlated to typewriting speed and speed of writing shorthand.	A student must have this skill to take dictation and transcribe it at high rates of speed.	Turse Shorthand Aptitude Test 1: Stroking
Basic arithmetic skills of addition, subtraction, multiplication, and division of whole numbers	This is the foundation for learning additional business math applications.	Basic arithmetic skill is required for several courses in the Executive Secretarial program (e.g., business math, accounting, office systems, business machines, typewriting).	CAT - Mathematics Section 9th grade level

GENERAL CLERICAL PROGRAM

The General Clerical program develops competence in many areas of office work. The student completing this 12-month course is ready for employment as general office worker in business and governmental agencies as typists, receptionists, and clerks in payroll, filing, billing, general office, mail, or information.

The simulated office practice work done the second summer term gives the student a chance to perform tasks found in entry-level jobs and helps the student decide what kind of job he would like and could do successfully.

GENERAL CLERICAL — CERTIFICATE

Term I

SES 0101	Typewriting	4 cr.
COM 0104	Reading Improvement	3
BTM 0101	Basic Busn. Math	5
SES 0110	Records Control	5
COM 0101	Vocab & Spell	5

Term IIIA

SES 0104	Typewriting	3 cr.
COM 0103	Business Writing	5
ACC 0101	Record Keeping	4

Term II

SES 0102	Typewriting	3 cr.
BAN 0101	Busn. Principles	5
COM 0102	Engl. for Business	5
MAN 0105	Human Relations	4
SES 0109	Business Machines	3

Term IIIB

SES 0204	Simulated Office Practice	5 cr.
SES 0111	Typewriting and Transcription	5

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
General Learning Ability: Ability to understand instructions and underlying principles.	This section measures the student's ability to understand written and oral instruction necessary to perform various job tasks.	The student will have to be able to comprehend written and oral instructions in order to have a meaningful learning experience and to perform various job tasks.	CAT - 8th grade minimum
Verbal Aptitude: Basic skills of English mechanics and the usage of grammar rules to form correct sentences and paragraphs.	This section measures the student's ability to understand the meaning and relationship of words and sentences and in learning the rules of grammar and punctuation.	The student will have to be able to communicate, oral and written, with others, using correct grammar and sentence structure. The student will have to compose replies to different types of business communications. Letters, phone calls, messages, past due notices, thank you replies, etc., in the world of work.	CAT - 8th grade minimum
Numerical Aptitude: Basic skills of addition, subtraction, multiplication, and division of whole numbers.	Required in performing computational work.	The student will have to perform computations in: Payroll, billing, sales, bank-check records. Must be able to add, subtract, multiply, divide - using whole numbers, decimals, fractions, and percents in the business world.	CAT - 8th grade minimum

PENSACOLA JUNIOR COLLEGE GENERAL CLERICAL PROGRAM CHARLES COLGAN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world or work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Spatial Aptitude: Ability to recognize geomatric forms and their relationships to other forms.	Required in placing objects in correct alignment.	The student will have to type letters, tables, other business forms, in correct form.	Test to be determined.
Clerical Perception: Ability to recognize columns of words and numbers to check for accuracy and to make comparisons to differences in shapes and sizes.	Required in reading and recording numbers and names quickly and accurately in filing letters, in preparing reports, composing letters, tables, and reports, and in posting data.	The student will have to file, record, type letters, reports, and tables in the field of work.	Test to be determined.
Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately.	Required in filing and sorting, and in performing various office machine operations.	The student will have to file and sort effeciently in the field of business communications.	Test to be determined.
Finger Dexterity: Must be able to move fingers rapidly with degree of accuracy.	Required in using office and business machines efficiently and accurately.	The student will have to be able to type and use business machines in their field of work.	Test to be determined.
Reading Level:	Text used in this program averages 10th grade reading level. For the student to be successful, the student must be able to comprehend at least most of the text materials.	The student will have to read and follow written instructions of texts and other printed materials.	CAT - 8th grade minimum.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Manual Dexterity: Ability to work the hands easily and skillfully.	Required in the use of operating various business and office machines.	The student will have to operate typewriters and calculating machines rapidly and accurately.	Test to be determined.

IMPORT AUTOMOBILE MECHANIC

Skills Definition:

Diagnoses, repairs, and/or overhauls the various system of the imported automotive vehicle. Plans work procedures with the aid of charts, technical manuals, and service bulletins. Disassembles and inspects components using precision measuring instruments, meters, gauges, and oscilloscope. Repairs or replaces parts as needed to achieve efficient and safe operation of the imported automotive vehicle. Welds, brazes, and solders the various components as required to successfully complete repairs. Is knowledgeable of the operational theory of the various components and systems of the imported automotive vehicle. Proves his workmanship by testing before considering the repair or repairs complete. Communicates with peers, supervisors, and customers regarding his work.

May be designated according to specialty (i.e., Electrical System Mechanic, Tune-Up Mechanic, Fuel System Specialist, Emission Control Specialist, Air Conditioning Mechanic, Suspension Specialist, Automatic Control Specialist).

IMPORT AUTOMOTIVE MECHANICS — CERTIFICATE-A.S.

Term I			Term II		
AMI 0101	F.C. Engine Theory	4 cr.	AMI 0116	Import Diesel Engine Theory	3 cr.
AMI 0102	F.C. Engine Lab	2	AMI 0114	Import Auto Tune-Up	3
AMI 0103	F.C. Power Train Theory	3	AMI 0107	Suspension Sys.	3
AMI 0104	F.C. Power Train Lab	2	AMI 0108	Susp. Sys. Lab	2
ENG 0101	CommunicationSkills	3	AMI 0115	Import Auto Tune-Up Lab	2
OSC 0101	Occupational Safety	2	MAP 0101	Applied Math	5

Term III

AMI 0110	F.C. Heating and Air Conditioning Theory	3 cr.
AMI 0111	F.C. Heating and Air Conditioning Lab	2
CUS 0101	Customer Services	3
AMI 0112	F.C. Service Operations	3
AMI 0113	F.C. Troubleshooting Lab	2
PHY 0101	Applied Physics I	5

A certificate of Proficiency is earned upon completion of the above three terms. The Associate of Science in Automotive Mechanics (Imports) may be earned by acquiring credits in additional collegiate level courses.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Tenth grade reading level	This is minimum level for using texts and manuals pertinent to this program.	The student must be able to read manufacturer's manuals and to comprehend written instructions.	10th grade level or higher on reading scale CAT Level V
Legible handwriting	A highly desirable trait for an automotive mechanical technician.	Written description of tasks and duties accomplished. Reporting and testing to prove one's knowledge of the subjects.	Application for entry into program.
Clear verbal communication	The student must communicate with instructor and fellow students.	To communicate verbally with shop operators and customers. To participate in learning with peers.	Interview
Mathematics at minimum 8th grade level. Ability to add, subtract, multiply, and divide whole, mixed, fractional, and decimal numbers.	To maintain personal records and calculate measurements to determine condition of components.	To be able to evaluate cost of labor sold, calculate his earned percentage and determine need for additional repairs by precision measurement and calculation.	8th grade level or higher on CAT Level V
Intelligence, reasoning, and comprehension	Automotive mechanics require organization, concentration, memory, and problem solving.	To understand instructors while learning tasks and duties of the automotive technician. To apply the principles of diagnosis to mechanical problems once the theory is taught.	No suitable testing document is available at this time.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Manipulative skill and manual dexterity	The work of the mechanic is physical and the use of tools is required. Certain pursuits may be hazardous.	The student is required to use hand tools, machine tools, and electrical equipment in the program and later in industry. He must function without endangering himself or others.	Subjective by instructor. May lead to extensive testing if indicated.
Physical mobility	Physical tasks of the mechanic include lifting, moving, bending, and stooping.	Measuring, testing, cleaning, moving, disassembling, assembling, and installing components of the automobile.	Determination will be subjective and occur during interview.
Positive attitude towards work in a structured organization.	Mechanics generally work in shops with highly defined hierarchy.	The student must have respect for fellow workers and his superiors while striving to produce a profit for the employing organization.	Interview with instructor--Subjective
Positive attitude toward working with others and in teams	Mechanics work in situations requiring cooperation with peers, superiors, and customers	Ability to produce personal work while assisting peers and superiors. Able to assist and satisfy customers.	Subjective evaluation during interview with instructor
Pride in personal accomplishment and ability	The mechanic's work is both physically and mentally demanding.	Self-esteem must be enhanced by the learning experience if the student is to succeed in the industry.	Subjective evaluation during interview by instructor

LEGAL SECRETARY

The one-year legal secretarial program is designed to produce high-level proficiency in typewriting, shorthand, machine transcription, preparation of legal documents, and general secretarial duties as they relate directly to the law office. Emphasis is also placed on an understanding of our court structures and procedures, human relations, and legal ethics. Through the cooperation of the legal community in Pensacola, PJC is able to offer work experience in which the students are placed in law offices on a part-time basis during the last six weeks of the program.

Employment opportunities for the well-trained legal secretary are unlimited. In addition to the private law office, there are many opportunities for the legal secretary in corporate legal departments of business firms, abstract companies, banks, insurance companies, and governmental offices.

LEGAL SECRETARY — CERTIFICATE-A.S.

Term I			Term II		
COM 0105	Vocab. &Spell.	5 cr.	STS 0402	Adv. Legal Shorthand	3 cr.
MAN 0105	Human Relations	4	SES 0108	Legal Typewriting	3
SES 0105	Typewriting	3	MTB 0102	Business Math	5
STS 0401	Legal Shorthand	4	BUL 0101	Business Law	5
ACC 0201	Accounting I	4	BAN 0101	Business Principles	5
SES 0110	Records Control	5	COM 0102	Engl. for Business	5
Term IIIA			**Term IIIB**		
SES 0303	Office Practice I	3 cr.	SES 0304	Office Practice II	3 cr.
SES 0301	Legal Vocabulary I	5	SES 0302	Legal Vocabulary II	4
COM 0103	Business Writing	5	SES 0305	Work Experience	3

A Certificate of Occupational Proficiency is earned upon the satisfactory completion of the above program. The Associate of Science in Legal Secretarial Studies may be earned by acquiring additional credits in collegiate level courses.

PENSACOLA JUNIOR COLLEGE | LEGAL SECRETARY | MURIEL B. WARREN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Verbal Aptitude	Student needs to understand the meaning of words and be able to use them effectively. Must have ability to comprehend language and to understand meanings of whole sentences and paragraphs.	The legal secretary deals with a different vocabulary, much of which is unique. Correct usage is vital to successfully maintaining a legal office. There is no margin for error; and the secretary, in order to produce correct documents, must understand the meaning of the vocabulary used.	CAT - Vocabulary Section 10th Grade
Desired reading level - 12th and 13th grade level (minimum of 10th grade level)	Textbooks used in the course offered in program average a 13.8 reading grade level. In order to function successfully, student must read near this level in order to comprehend material in texts.	Composing data, as well as transcribing prepared material for legal documents, requires a high level of reading and comprehension. Legal research is a vital part of duties. Ability to read and comprehend material of a legal nature is a prerequisite to success in a law office.	CAT - Reading Section 10th Grade
Numerical: Basic skills of addition, subtraction, multiplication, and division of whole numbers	Student needs to be able to perform arithmetic operations quickly and accurately.	These skills are necessary as a foundation for Business Math and Accounting. Legal secretaries receive and account for monies from fees and disburse monies for expenses. They handle payrolls, make deposits, and reconcile bank statements. They are responsible for the receipt and disbursement of escrow accounts.	CAT - Arithmetic Section 8th Grade

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Spatial Aptitude	Students need ability to visualize structural forms.	Students must reach a high level of speed in shorthand. Accuracy is of equal importance, and students must "see" and "read" forms quickly and accurately.	In process of selecting test to be used.
Form Perception	Students must be able to perceive detail in objects and to make visual comparisons.	Most of the work done in class or on the job has to be set up in proper form--form that has been perfected for various tasks in line with legal requirements at local, state, and federal levels. These forms should be easily recognized with minimum time and effort.	In process of selecting test to be used.
Clerical Perception	Students need to be able to perceive detail in verbal and/or tabular material.	Proofreading is a required skill. Success in school or in the office will be determined on the ability to proofread, find, and correct errors before the instructor or employer views the work. Serious problems result from uncorrected errors.	In process of selecting test to be used.

PENSACOLA JUNIOR COLLEGE LEGAL SECRETARY MURIEL B. WARREN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Motor Coordination	Eye/hand coordination with highly specialized material with both speed and accuracy.	Use of transcribing and modern word-processing equipment is required. Must be able to concentrate on specialized material while operating office equipment.	In process of selecting test to be used
Finger Dexterity	Students must be able to move fingers rapidly with high degree of accuracy.	Must reach high levels of speed and accuracy in typing and transcribing from copy as well as shorthand notes.	In process of selecting test to be used
Manual Dexterity	Need ability to move the hands easily and skillfully	Legal secretary uses modern office equipment--duplicating, and computer-type word processing equipment.	In process of selecting test to be used
High school GPA 2.0+ or, 15 hours college credit	Evidence of successful completion of previous course work.	All courses must be successfully completed each term as prerequisites for following team's work.	High school transcript or college transcript.
Shorthand, any theory	Must be able to take new-matter dictation for 3 minutes at 70 wpm and transcribe with 95 percent accuracy.	Must reach and maintain speeds of at least 200 wpm on legal material to successfully compete in legal secretary field.	Coordinator will dictate at 70 wpm for 3 minutes at least twice. A 'warm-up' session will precede dictation for transcription.

PENSACOLA JUNIOR COLLEGE | LEGAL SECRETARY | MURIEL B. WARREN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Typing at 45 gwpm for five minutes with not more than five errors	Students are expected to begin the program with an advanced typing proficiency.	Students must reach and maintain the highest possible speed with minimum errors (minimum speed of 70 wpm to enter legal field).	Timed writing (1.5 syllable intensity) to be given by testing center, counselor, or program coordinator. -or- Two years high school typing with "B" average.
Ability to understand instructions and underlying principles.	Need ability to reason and make sound decisions.	Closely related to doing well in school and on the job.	CAT - Section 8 - Language Usage and Structure 10th Grade
Hearing (Normal)	Must be able to hear and differentiate between legal words that sound alike when taking dictation orally or from machine.	Must be able to produce error-free copy of work to be submitted to court.	Hearing needs to be normal or corrected to normal by use of hearing aid. Standard hearing test administred by competent agency if requested by student and/or coordinator.

MEDICAL SECRETARY

The one-year medical secretarial program is designed to develop competency in skill areas (bookkeeping, typewriting, and transcription); proficiency in office procedures; accuracy in interpretation and spelling of medical terminology; and good human relations techniques. Depending upon individual potential, the students are prepared for positions as receptionists, secretaries, and transcriptionists in doctors' offices, insurance agencies, clinics, and health agencies, including medical records, pathology, and transcription departments of general hospitals.

During the last term of the certificate program, the student interns in a hospital or clinic for three weeks and then interns in a doctor's office for three weeks under the direction of the coordinator.

MEDICAL SECRETARY — CERTIFICATE-A.S.

Term I			Term II		
SES 0101	Typewriting	4 cr.	SES 0405	Transcription	3 cr.
MTB 0102	Business Math	5	SES 0409	Medical Terminology	5
SES 0403	Medical Terminology	5	ACC 0201	Accounting I	4
COM 0101	Vocab. & Spelling	5	COM 0102	English for Business	5
MAN 0105	Human Relations	4	SES 0403	Office Practice	3
SES 0110	Records Control	5	SES 0408	Pharmacological Term.	5

Term IIIA			Term IIIB		
COM 0103	Business Writing	5 cr.	SES 0411	Medical Term.	5 cr.
SES 0406	Transcription	3	SES 0412	Transcription	5
SES 0410	Medical Term.	5	SES 0407	Work Experience	3

A Certificate of Occupational Proficiency is earned upon completion of the above program. The Associate of Science in Medical Secretarial Studies may be earned by acquiring additional credits in collegiate level courses.

PENSACOLA JUNIOR COLLEGE | MEDICAL SECRETARY | DIANE S. SUTTON

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world or work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Verbal Aptitude desired. Reading Level: 11, 12, 13 Grade (minimum level accepted: Grade 10.)	The student must be able to understand the meaning of words, use them effectively, and comprehend textbook materials.	Medical terminology, anatomy, and medical office practice texts have a highly specialized vocabulary; and the reading level ranges from 12.6 to 18.2 grade level. All materials must be read and understood.	CAT - Vocabulary Section 10th grade CAT - Reading Section 10th grade
Basic skills of addition, subtraction, multiplication, and division of whole numbers.	The student must have the ability to perform simple arithmetic operations quickly and accurately.	These skills are necessary as a foundation for business math, accounting, and business applications, i.e., payments of fees, ledger entries, preparation of statements, etc.	CAT - Arithmetic Section 8th grade
Spatial Aptitude	The student needs some degree of ability to visualize structural forms in deciphering medical abbreviations and reading the doctor's handwriting.	The student must be able to read the doctor's handwriting and work with business machines and equipment in a mechanical sense.	In process of selecting test to be used.
Form Perception	Measures kind of eyesight an individual has and skillfulness of the eyes in performing function of perceiving. Very low scores may indicate eye problem.	The student must have adequate perceptual skills to attend to the many details in medical work that require making visual comparisons and discriminations.	In process of selecting test to be used.

PENSACOLA JUNIOR COLLEGE | MEDICAL SECRETARY | DIANE S. SUTTON

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Detail Perception	Need ability to proofread and recognize differences in material	The medical secretary must be able to recognize errors as they might result in a life-death situation. Must be able to quidkly assess work for its accuracy.	In process of selecting test to be used.
Motor Coordination	Need ability to coordinate eyes, hands, or fingers, rapidly and accurately in making precise movements with speed.	Must be able to work effectively and efficiently with word processing equipment, i.e., memory and mag card typewriter, transcribers, duplicating equipment, etc.	In process of selecting test to be used.
Finger Dexterity	Finger dexterity is highly related to speed of machine transcription and typewriting.	The student must be able to transcribe and typewrite at high rate of speed accurately.	In process of selecting test to be used.
Manual Dexterity	Manual dexterity is highly related to speed of machine transcription and typewriting.	The student must be able to transcribe and typewrite at high rate of speed accurately.	In process of selecting test to be used.
Ability to understand instructions and underlying principles.	Need ability to reason and make sound decisions.	Closely related to doing well in school.	CAT - Section 8 - Language Usage and Structure 10th grade
Ability to typewrite at 35 words per minute on 5-minute test	Need basic skill at typewriting to take Medical Secretary Typing.	Typewriting is a foundation for medical office practice and medical transcription.	Five-minute timed writing on average copy (1.5 syllable intensity).

PENSACOLA JUNIOR COLLEGE MEDICAL SECRETARY DIANE S. SUTTON

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Normal hearing or satisfactorily corrected hearing	Must be able to transcribe medical dictation from transcription machine.	Medical transcription skills are necessary to complete Medical Transcription I, II, III, and the Internship.	Audiological testing if deemed necessary by student and/or coordinator.
Overall 2.0 high school GPA or 2.0 GPA upon completion of 15 semester hours of college work.	Evidence of successful completion of previous course work.	All courses must be successfully completed each term as prerequisites for following term's work.	High school transcript College transcript

OFFICE MANAGEMENT AND SUPERVISION

This two-year associate of science program gives a management approach to office services. As routine, repetitive tasks are transferred to automatic equipment, the office worker needed is one who has high-level understanding of the functioning of the organization and high-level decision-making skills. The focus in this program is preparing one with skills and understandings required in a technological age.

OFFICE MANAGEMENT AND SUPERVISION — A.S.

FIRST YEAR

Term I			Term II		
MAN 1700	Business	3 cr.	COC 1300	Computers	3 cr.
ENC 1103	English	3	ENC 1136	English	3
MTB 1103	Mathematics	3	MAN 2000	Management	3
MAN 1740	Records Mgmt	3	SES 1361	Machine Transcription	3
SES 1100	Typewriting	3	ECO 2013	Economics I	3
HPR___	Physical Educ	(1)	HPR___	Physical Educ	(1)

SECOND YEAR

Term I			Term II		
ACC 2001	Accounting I	3 cr.	MAN 2100	Human Relations	3 cr.
COM 2100	Communications	3	ACC 2021	Accounting II	3
BUL 2111	Business Law I	3	SES 1340	Office Management	3
MAN 1200	Personnel Mgmt.	3	AMH 1550	American Constitution	1
SES 1160	Office Services	3	___ ___	Humanities	2
HPR___	Physical Educ	(1)	SES 2949	Simulation/Internship	3
			HPR___	Physical Education	(1)

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Reading Level Grade Level: 10-12	To read textbooks and outside material of this grade level	Proofread and edit Interpret factual data Prepare operational manuals	California Achievement Test Grade Level: 10
Writing Skills: Spelling, punctuation, grammar, and sentence structure	To gain competence in composing business letters, proofreading, and editing	Compose and edit letters Proofread Prepare outgoing mail	Test prepared by instructor 90 percent accuracy
Math ability, Grade 8 Adding, subtracting, multiplying, and dividing whole numbers, fractions, and decimals	To understand problems and statistical reports	Solve problems Prepare statistical reports Plan and control budget	CAT: Computation, Arithmetic, Reason Grade Level: 11
Motor Coordination	Transcription skills require hand-foot-ear	Transcribe, type, maintain production logs	Test being developed
General Learning Ability	The ability to understand instructions	Make decisions in problem areas	CAT: Vocabulary, Arithmetic, Reason Grade Level: 10
Clerical Perception: Shows speed with which names can be matched for being same or different	To perceive pertinent detail in verbal or tabular form. For proofreading.	Maintain quality and quantity Follow through on assignments	Test being developed
Verbal Aptitude	To be able to give directions Make presentations Conduct meetings	Delegate duties Public relations Conduct meetings	CAT: Vocabulary Grade Level: 10

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Typewriting. Minimum 30-35 wpm/ error limit on 5-minute writing, SI 1.3	To gain competence needed for business	Type outgoing and interoffice communications. Prepare office reports. Transcribe. Compose and edit and type, and retype. Prepare operational manuals Other Tasks Related to All Competencies: Conduct orientation and supervise personnel. Coordinate office work Schedule/Prioritize/Manage Follow through on Assignments Conduct performance measurements	Instructor will test on 5-minute timing Minimum speed 30-35 wpm Error limit 5 SI 1.3
Hearing: Should be in the normal range with or without hearing aid	To hear instructor in normal speaking voice	Normal hearing is expected in the office.	Student will be tested by giving instructions for the CAT in a normal-speaking voice.
Eyesight: Should be normal or corrected with glasses or contacts.	Good eyesight is essential in proofreading, checking clerical work, and in perceiving details.	For proofreading, typing, and filing.	Checked by instructor
Comprehension. Grade 10	Shows ability to understand business communications	For handling verbal communications	Given a one-page story to read, should be able to write summary paragraph with 90 percent accuracy.

STENOGRAPHY

The one-year Stenographic-Secretarial program is designed to prepare the student for work in an office as a stenographer and to increase his/her knowledge and understanding of the business world. The program emphasizes the writing and transcribing of shorthand. Closely related to the transcribing of shorthand is a thorough knowledge of business English. Students completing the program are skilled in typewriting, filing, and office machines and have some knowledge of accounting, business principles, and data processing.

STENOGRAPHY — CERTIFICATE-A.S.

Term I			Term II		
STS 0101	Beginning Shorthand	4 cr.	STS 0103	Shorthand Dictation	3 cr.
SES 0101	Typewriting I	4	SES 0102	Typewriting II	3
MTB 0102	Business Math	5	COM 0102	English for Business	5
COM 0101	Vocab. & Spelling	5	MAN 0105	Human Relations	4
SES 0110	Records Control	5	SES 0109	Business Machines	3
BAN 0101	Business Prin.	5	ACC 0201	Accounting I	5
Term IIIA			**Term IIIB**		
STS 0105	Shorthand Trans.	3 cr.	STS 0104	Shorthand Speed Building	3 cr.
COM 0103	Business Writing	5	SES 0105	Typewriting IV	3
SES 0104	Typewriting III	3	STS 0206	Stenography Work Exp	3

A Certificate of Occupational Proficiency is earned upon completion of the program. The Associate of Science in Stenography (A.S. degree) may be earned by additional credits in collegiate level courses.

PENSACOLA JUNIOR COLLEGE | STENOGRAPHIC-SECRETARIAL | JANET MARTIN, JUDITH RESCH, PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Interest in stenographic, office-related work	Necessary motivational factor and an important contributor to persistance.	Frequently a student with no interest in this type of work usually drops out early in the program. Through proper counseling, much student time, energy, and money could be saved. Graduates will be more satisfied office workers.	Strong-Campbell Interest Inventory
Tenth grade reading level	To comprehend textbook materials. Textbooks are written at this average grade level.	All textbook materials must be read and understood to be of help to the student in the classroom.	CAT--10th grade level Language usage and structure section.
Ability to read cursive writing	Some textbook problems, chalkboard illustrations, and written directions are often done in cursive writing.	Rough draft materials in an office are usually done in cursive writing.	The student will read orally a paragraph in cursive writing, making no uncorrected errors.
Ability to understand instructions and underlying principles.	Need this ability to reason and to make knowledgeable judgments.	Closely related to doing well in school and on the job. The student must be able to follow instructions.	CAT--8th grade level Reading comprehension section

PENSACOLA JUNIOR COLLEGE | STENOGRAPHIC-SECRETARIAL | JANET MARTIN, JUDITY RESCH, PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Ability to learn abstract symbols	Shorthand is based on different sizes, shapes, and directions of symbols.	Shorthand is required in this field of work with 80 wpm with 95 percent accuracy as the minimum competency to be acquired.	Have no test to measure.
Concentration, listening, memory skills, and phonetic association	For shorthand performance--one must write, carry matter in mind, and listen as he/she writes. Also, these skills are necessary for following general classroom directions.	If sounds are not heard and remembered, they cannot be written during office dictation.	CAT--8th grade level Composite score
Word sense--have ability to construct whole word from a few known letters or symbols	Shorthand is an abbreviated system of writing. Longhand notes and instructions frequently include non-standard abbreviations.	Shorthand employs large numbers of special abbreviations, phrasing, and contracting devices.	CAT--___ grade level Vocabulary section
Manual dexterity	Manual dexterity is highly correlated to the speed of shorthand writing and typewriting proficiency.	To take shorthand at dictation speed and successfully transform it into typwritten copy.	Turse Shorthand Aptitude Test Test 1: stroking
Detail perception	Ability to proofread and recognize differences in materials is needed.	To avoid perceptual errors in work done in class and on the job.	Have no test at this point

PENSACOLA JUNIOR COLLEGE

STENOGRAPHIC-SECRETARIAL

JANET MARTIN
JUDITH RESCH
PATRICIA TRACHY

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
Basic skills of adding, subtracting, multiplication, and division of whole numbers	Foundation for learning additional business math applications	Required for accounting, office machines, and business applications (payroll, petty cash, tabulated material)	California Achievement Test 7th grade level Arithmetic section
Differences between similar-sounding words (e.g., lose, loose)	Students sometimes encounter ambigious shorthand characters. Need to discriminate between two or more words suggested by outlines.	Can't transcribe acceptably without this skill.	California Achievement Test _____ grade level Vocabulary and Reading section
Basic spelling ability of commonly used words	Spelling ability of common vocabulary words is a highly desirable trait for office workers.	In order to produce acceptable office work, it must be spelled correctly.	Teacher-constructed test of 25 common words. Score of 90 percent accuracy
Grammar basics: The ability to comprehend the English language	A student needs to understand the meanings of whole sentences and paragraphs.	This skill is necessary for accurate transcription and for written communication in class and on the job.	California Achievement Test 8th grade level Language Usage and Structure

SUPERMARKET CASHIERING

The 120 - 160 hour program prepares the student with job-entry skills to operate supermarket equipment. He/she learns to make change, handle USDA Food Stamps, sales tax, vendor and store coupons, bottle situations, split prices, and items taxable. Customer courtesy is discussed in relation to each new situation the student encounters so that he/she understands the importance the company places on a favorable image.

The student learns the role of each department in the supermarket and how each employee is a functioning part of the entire enterprise. The grooming requirements are also learned.

PENSACOLA JUNIOR COLLEGE SUPERMARKET CASHIERING PROGRAM LILLIAN C. MCLEAN

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
The student should be reading on an 8th grade level.	The textbooks and handout materials are on a 7th to 10th grade level.	The 8th grade reading level is required so the student will be capable of reading and discussing written handouts, texts, and written directions in working with the equipment and merchandise in the classroom/lab. The student will therefore be prepared to meet job entry requirements.	California Achievement Test--8th grade reading level
The student should not have any problems with eyesight nor coordination of eyes, hands, fingers, and handling items.	The student must be able to distinguish one item of merchandise from another in order to ring it into the correct department and/or functional key.	The student will ring assorted merchandise of different prices and departments into four different models of register with accuracy and speed.	Have no test at this time.
The student must be able to distinguish one number from another (19¢ from 91¢).	The student must ring correct prices into the correct department to assure accuracy.	Classroom cash register work begins with basic orders of merchandise and progresses to more complicated orders involving all departments, coupons (store and vendor), split prices, change making, bottle situations, USDA Food Stamps, checks, sales tax, and taxable items.	Have no test at this time.

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
The student should be capable of working basic mathematical problems with whole numbers and decimals. The student should be capable of adding, subtracting, multiplying, and dividing.	The required math enables the student to figure state sales tax and to make change accurately.	The student will ring assorted taxable and nontaxable items of merchandise at various prices, and will mentally figure and add sales tax to the orders. The student will make change using two different methods.	California Achievement Test 8th grade level Arithmetic section
The student should be capable of adding and multiplying fractions.	The fraction requirement enables the student to figure split or multiple (3 for 25¢) price accurately.	Some prices of the assorted merchandise will be multiple prices which the student must figure mentally and ring into the register accurately.	See above
The student should be capable of working with and for other people.	The student must be able to work with fellow employees and customers because the supermarket serves the public.	The student will work in groups of three or four team mates in the classroom/lab checking out assorted merchandise, following correct procedures.	Entrance evaluation: None
The student must speak English clearly and distinctly.	The student must speak English clearly and distinctly enough for fellow team mates and customers to understand the explanation of the cashier.	The students will be rotated from one group to another and will be required to explain policies and procedures to each other as necessary.	See above

BEGINNING LEVEL

Competency - What should the student know (basic skills) in order to have a successful learning experience?	Rationale - Why is the entry level competency needed?	Program Competency - How is this competency related to the program and/or world of work?	Evaluation - How will the student be tested to indicate he/she has reached the competency desired?
The student should have normal physical attributes which would not require any support devices.	The requirement will enable the student to work in most local supermarket situations.	The job requirements for the local supermarket industry are for persons who can stand unsupported for long periods of time, and who can move freely around and about the check-out area.	The student will be visually reviewed for support devices at the entrance test.
The student should be able to hear others speaking to him at a normal speaking level. from a reasonable proximity (correction devices acceptable).	Customers expect cashiers to hear their requests from within the general area of the checkout.	The local supermarket industry expects their employees to respond to questions courteously.	The student is given oral directions during the entrance test.

READABILITY ANALYSIS

An obvious entry-level competence is reading, but at what level should the student read? What should be the determiner of the level? For the Entry-Level Competency Project we decided that the textbook and learning materials were the criteria for establishing the prerequisite reading competency.

Several readability formulas exist--Dale, Flesch, Fog, and Frye. Although they are fundamentally simple, they are tedious and time consuming to use. To facilitate the determination of the readability of textbooks and learning materials, a computerized reading level analysis was developed. The program and instructions are found in the appendix.

A word of caution should be given. The readability of a textbook is only one bit of datum to be used in determining the entry-level reading competence. The uniqueness of the vocabulary; the abstractness of the concepts; the use of illustrations, charts and diagrams; and the motivation of the student must all be considered together with the readability of the text.

Pages 71-73 ("A Computerized Reading Level Analysis," Noojin Walker and Michel Boillot, Educational Technology, January, 1979) were removed prior to the document's submission to the ERIC Document Reproduction Service.

CONTENTS

Readability Program for Punched Cards	RC-1
Data Cards Deck	D-1
Scalenos	S-1
Syllable File	SF-1
Output from Cards	OC-1
Special Output	SO-1
Readterm Program for Terminal Input	RT-1
Output from Terminal	OT-1

```
      FILE            8=SCALENCS,UNIT=DISKPACK,BLOCKING=30,RECORD=14
      FILE       11=SYLLABLE,UNIT=DISKPACK,BLOCKING=30,RECORD=14
       COMMON TEXT(2000),LP,IP100,NP,IREC
       COMMON LASTP
       COMMON ONESYL(174,10)
       COMMON IBE,CHAR
       COMMON /BLOCK/FRY(100),FLCH(100),IFRY,LLCH
       COMMON/TEXT/T
       DIMENSION TITLE(80),ADJUST(100)
       READ(11,11)((ONESYL(I,J),J=1,10),I=1,174)
       READ(5,60)T
        60 FORMAT(A6)
       READ(5,87)TITLE
       87 FORMAT(80A1)
       IF(T.EQ."NOTEXT")GOTO444
       PRINT 88,TITLE
       444 IFRY=0
       88 FORMAT(T10,"READABILITY ANALYSIS FOR: ",80A1///)
       IFLCH=0
       KT=0
       1 IREC=80
       REWIND 8
       REWIND 11
       11 FORMAT(10A1)
       LINBUF=IREC
       CHAR=0
      NWORDS=0
      IS=1
        18 READ(5,6,END=23)(TEXT(I),I=IS,LINBUF)
      TEXT(LINBUF+1)=" "
      LP=NP
       6 FORMAT( 80A1)
      CALL WDSPER(NWORDS,IS,LINBUF+1)
       IF(NWORDS.GE.100) GOTO71
       IS=IS+IREC+1
       LINBUF=IS+IREC-1
       GO TO 18
       71 LP=NP
       CONTINUE
       L=1
       DO 16 M=1,LINBUF/80
       IF(T.EQ."NOTEXT")GOTO16
       PRINT 33,(TEXT(K),K=L,L+79)
       16 L=L+81
       CALL SENTEN(LINBUF)
       IF(T.EQ."NOTEXT")GOTO440
       PRINT 44
       44 FORMAT(//T5,36("*")//T5,"FLESCH INDEX WITH 60 WORDS"//T5,36("*"
       440 CALL READTE(TEXT,NP+1,0.,  1)
       CALL FRACSE(S1)
       CHAR=-6
       IF(T.EQ."NOTEXT")GOTO460
       PRINT 46
       46 FORMAT(//T5,36("*")//T5,"FRYE WITHOUT LIST"//T5,36("*"))
```

```
      460 CALL READTE(TEXT,IP100,S1,0)
      4 READ(5,7,END=23)IDOLL
      7 FORMAT(A1)
      IF(IDOLL.NE."$")GOTO4
      IF(T.EQ."NOTEXT")GOTO74
      PRINT 3
      74 KT=KT+1
      3 FORMAT("1")
      GOTO1
      33 FORMAT(" ",80A1)
      STOP
      23 T1=0
      T3=0
     PRINT 103,TITLE
      103 FORMAT(1X," "READABILITY ANALYSIS FOR:",80A1/)
     PRINT 130
     130 FORMAT(T10,"PASSAGES",T20,"FRY",T26,"FLESCH",T34,"ADJUSTED"/)
     DO 105 I=1,KT
     IF(FRY(I).LT.0)GOTO105
     AD=1.03*FRY(I)
     IF(AD.LE.9) GOTO30
     IF(AD.GT.9.AND.AD.LT.10)GOTO31
     ADJUST(I)=FLCH(I)
     GOTO32
      30 IF(FRY(I).EQ.0)GOTO79
      ADJUST(I)=AD
      GOTO32
      79 ADJUST(I)=FLCH(I)
      GOTO32
     31 ADJUST(I)=(AD+FLCH(I))/2
     32 T2=T2+ADJUST(I)
     T3=T3+1
     PRINT 108,I,FRY(I),FLCH(I),ADJUST(I)
     108 FORMAT(T10,I5,T19,F4.1,T26,F5.1,T34,F7.1)
     105 CONTINUE
     A1=T2/T3
      DO 333 J=1,KT-1
     K=J
     DO 34 I=K+1,KT
     IF(ADJUST(K).LE.ADJUST(I))GOTO34
     K=I
     34 CONTINUE
     T=ADJUST(J)
     ADJUST(J)=ADJUST(K)
     ADJUST(K)=T
      333 CONTINUE
     J=KT/2
     X=KT/2.
     IF(J.NE.X)GOTO36
     X=(ADJUST(J)+ADJUST(J+1))/2
     GOTO37
      36 X=ADJUST(J+1)
      37 S=0
     SQ=0
     DO 247 I=1,KT
      S=S+ADJUST(I)
      247 SQ=SQ+ADJUST(I)**2
     AV=S/KT
     IF(KT.EQ.1)GOTO121
     ST=SQRT((KT*SQ-S*S)/(KT*(KT-1)))
```

```
115     122 PRINT 39,A1,X,AV,S;
116    39 FORMAT(//" READABILITY LEVEL    ",T21,F5.1/
117     *          " MEDIAN                ",T21,F5.1/
118     *          " MEAN                  ",T21,F5.1/
119     *          " STANDARD DEVIATION    ",T21,F5.1///////)

120    STOP
121     211 J=0
122    GOTO36
123     121 ST=0
124    GOTO122
125     STOP
126     END
127     SUBROUTINE WDSPER(NWORDS,IST,LAST)
128     COMMON TEXT(2000),LP,IP100,NP,IREC
129     COMMON LASTP
130     COMMON ONESYL(174,10)
131     COMMON IBE,CHAR
132     REAL L
133    ISTART= IST
134    6 DO 10 I=ISTART,LAST
135    IF(TEXT(I).NE." ") GO TO 15
136    10 CONTINUE
137    IF(I.EQ.LAST+1)GO TO 35
138     15 IBEG=I
139    DO 20 J=IBEG,LAST
140     L=TEXT(J)
141     IF(L.EQ.".".OR.L.EQ."!".OR.L.EQ."?".OR.L.EQ.";".OR.L.EQ.":")NP=J
142    IF(TEXT(J).EQ." ")GOTO25
143    20 CONTINUE
144     IF(I.EQ.LAST+1)GOTO35
145     25 NWORDS=NWORDS+1
146     IF(NWORDS.EQ.100) GOTO84
147      33 ISTART=J
148    GO TO 6
149     84 IP100=J-1
150     LASTP=NP
151     GO TO 33
152    35 RETURN
153     END
154     SUBROUTINE SENTEN(LINBUF)
155     COMMON TEXT(2000),LP,IP100,NP,IREC
156     COMMON LASTP
157     COMMON ONESYL(174,10)
158     COMMON IBE,CHAR
159     COMMON      /TEXT/T
160     REAL L
161     IKP=LASTP+1
162     18 DO 10 I=IKP,LINBUF+1
163     L=TEXT(I)
164     IF(L.EQ.".".OR.L.EQ."!".OR.L.EQ.";".OR.L.EQ.":".OR.L.EQ."?")GOTO24
165    10 CONTINUE
166     IF(T.EQ."NOTEXT")GOTO291
167    PRINT 6
168      6 FORMAT(" TRANSMIT TILL EITHER OF . ! ? ; OR :")
169     291 IKP=LINBUF+1
170     IC=IKP+IREC-1
171     LINBUF=IC
172    READ(5,5,END=24)(TEXT(K),K=IKP,IC)
173     IF(T.EQ."NOTEXT")GOTO1
```

RC-3

```
174     PRINT 44,(TEXT(K),K=IKP,IC)
175     44 FORMAT(1X,80A1)
176     5 FORMAT(80A1)
177    1 TEXT(IC+1)=" "
178    GO TO 18
179     24 NP=I
180     IF(T.EQ."NOTEXT")RETURN
181     PRINT 7
182     7 FORMAT(" YOU HAVE TYPED OVER 100 WORDS.PRINTOUT WILL BEGIN")
183    RETURN
184    END
```

```
185     SUBROUTINE FRACSE(S1)
186     INTEGER CH(7)
187     DATA CH/".","  ",",","?",":",";","!"/
188     COMMON TEXT(2000),LP,IP100,NP,IREC
189     COMMON LASTP
190     COMMON ONESYL(174,10)
191     COMMON IBE,CHAR
192     COMMON/TEXT/T
193     K1=LASTP+1
194    K2=IP100+1
195    K3=NP-1
196     IWORDS=0
197    CALL BDSPER(IWORDS,K1,K3)
198     LWORDS=0
199    CALL BDSPER(LWORDS,K1,K2)
200    S1=LWORDS+1./IWORDS
201     CHAR=0
202     DO 10 I=1,IP100
203     DO 5 J=1,7
204     IF(TEXT(I).NE.CH(J))GOTO5
205     GOTO10
206     37 FORMAT(" NO. CHARACTERS PER 100 WORDS IS ",F7.0)
207     5 CONTINUE
208    CHAR=CHAR+1
209     10 CONTINUE
210     IF(T.EQ."NOTEXT")RETURN
211     PRINT 37,CHAR
212     RETURN
213    END
```

```
214     SUBROUTINE FRYE(S2,S1)
215     COMMON DUM(3746),CHAR
216     COMMON/BLOCK/FRY(100),FLCH(100),IFRY,IFLCH
217     COMMON /TEXT/T
218     DIMENSION SYAR(25)
219     INTEGER G(25,33)
220     REWIND 8
221     REWIND 11
222     DO 9 I=1,25
223     READ(8,1)(G(I,J),J=1,33)
224     9 CONTINUE
225     1 FORMAT(33I2)
226     READ(8,2)(SYAR(I),I=1,11)
227     READ(8,2)(SYAR(I),I=12,25)
228     2 FORMAT(14F4.0)
229     IC=(S1-108)/2.+1.5
230     IF(S2.LT.3.6.OR.S2.GT.25.OR.S1.LT.108.OR.S1.GT.172)GOTO 19
231     51 FORMAT(" OUTSIDE FRYE ENVELOPE")
232    DO 10 I=1,25
```

```
      IF(S2.GE.SYAR(I)) GO TO 10
       IF(ABS(S2-SYAR(I-1)).LT. ABS(S2-SYAR(I)))GOTO37
       IR=I
       GO TO 39
       37 IR=I-1
       GOTO39
      10 CONTINUE
       39 CONTINUE
       IF(I.EQ.26)IR=25
       IR=26-IR
       IGR=G(IR,IC)
       IFRY=IFRY+1
       FRY(IFRY)=IGR
      IF(IGR.GT.12)GOTO16
      IF(IGR.LT.1)GOTO17
       IF(T.EQ."NOTEXT")RETURN
       PRINT 6,IGR

      6 FORMAT(T5,"FRYE LEVEL EQUIVALENT=",T28,F6.0)
       RETURN
       16 IF(T.NE."NOTEXT")PRINT 7
       RETURN
       17 FRY(IFRY)=0
       IF(T.EQ."NOTEXT")RETURN
       PRINT 51
       RETURN
       19 IFRY=IFRY+1
       FRY(IFRY)=0
       IF(T.EQ."NOTEXT")RETURN
       PRINT 51
       RETURN
      7 FORMAT("  COLLEGE LEVEL ONLY")
      8 FORMAT("  NO GRADE LEVEL")
      END
      SUBROUTINE READTE(TEXT,N,FRAC,FLAG)
       INTEGER V1(6),C1,P1(5),V
       DATA  P1,C1/".","?","!",":",";",",","/
       DATA V1/"A","E","I","O","U","Y"/
       DATA LB/" "/
       P=5
       IBE=0
       Z=0
       S1=0
       W1=0
       S2=0
       INTEGER TEXT(2000),A(50),LET(100),CAL(100,25)
       COMMON IEXT(2000),IP,IP100,NP,IREC
       COMMON LASTP,ONESYL(174,10),IBE
       COMMON CHAR
       COMMON/BLOCK/FRY(100),FLCH(100),IFRY,IFLCH
       COMMON/TEXT/T
        DO 64 J=1,30
       DO 64 I=1,25
       64 CAL(J,I)=LB
       L=134
      IBEG=1
       77 FORMAT(I1)
       9 CALL CHANGE(TEXT,A,IBEG,LEN,N)
       IF(IBE .GT.500) GO TO 44
      W1=W1+1
```

```
292   V=0
293   B=LEN
294    IF(A(B).NE.C1)GOTO51
295    B=B-1
296    GO TO 57
297    51 DO 55 I=1,P
298   IF(A(B).NE.P1(I)) GO TO 55
299   S1=S1+1
300   B=B-1
301   GO TO 57
302   55 CONTINUE
303   57 IF(B.GT.3)GO TO 53
304   V=1
305   GO TO 80
306   53 IF(.NOT.(A(B).EQ."D".AND.A(B-1).EQ."E"))GO TO 58
307    IF(A(B-2).EQ."T".OR.A(B-2).EQ."O")V=1
308   59  B=B-2
309   GO TO 60
310   58 IF(A(B).EQ."S".AND.A(B-1).EQ."E")GO TO 59
311   IF(A(B).EQ."E".AND.A(B-1).EQ."L") GO TO 62
312   60 IF(A(B).NE.V1(2)) GO TO 62
313   B=B-1
314   62 L=0

315   DO 70 I=1,B
316   DO 75 J=1,6
317   IF(A(I).NE.V1(J)) GO TO 75
318   IF(I.EQ.1)GO TO 78
319   L1=I-L
320    IF(L1.EQ.1)GO TO 91
321   78 V=V+1
322   71 L=I
323   GOTO70
324    91 IF(I.EQ.B)GO TO 71
325    DO 92 JK=1,6
326    IF(A(I+1).EQ.V1(JK))V=V+1
327    92 CONTINUE
328    GO TO 71
329   75 CONTINUE
330   70 CONTINUE
331    IF(V.GT.0)GO TO 109
332   V=1
333    80 S2=S2+V
334   IF(V.LT.3)GO TO 9
335    Z=Z+1
336    LET(Z)=V
337    DO 337 IT=1,LEN
338    337 CAL(Z,IT)=A(IT)
339   GO TO 9
340   109 IF(LEN.GT.10.OR.V.LT.2)GO TO80
341    IF(FLAG.EQ.2) GO TO 80
342    IF(CHAR.EQ.-6) GOTO80
343    DO 138 I=1,174
344   DO 139 J=1,LEN
345   IF(A(J).NE.ONESYL(I,J))GO TO 138
346   139 CONTINUE
347   V=1
348    GO TO 80
349   138 CONTINUE
350   GOTO80
```

If multisyllabic words (≥3) are desired print array CAL(x,x)

```
351     44 S1=S1 +FRAC
352     IF(T.EQ."NOTEXT")GOTO617
353    PRINT 101,S1
354    101 FORMAT(T5,"NUMBER OF SENTENCES =",T28,F8.2)
355    PRINT 102,W1
356    102 FORMAT(T5,"NUMBER OF WORDS =",T28,F8.2)
357    PRINT 103,S2
358      103 FORMAT(T5,"NUMBER OF SYLLABLES =",T28,F8.2)
359     617 IF(FLAG.EQ.0)GO TO 1327
360    F3=W1/S1
361    F4=S2/W1
362    F1=206.835-F3*1.015-F4*84.6
363    F2=11.534-0.053*F1
364    G1=-(F1-150)/10.
365    G2=-(F1-110)/5.
366    G3=-(F1-93)/3.33
367    G4=-(F1-140)/6.66
368     IF(T.EQ."NOTEXT")GOTO618
369    PRINT 104,F3
370    104 FORMAT(T5,"AVERAGE SENTENCE LENGTH =",T28,F8.2)
371    PRINT 105,F4
372    105 FORMAT(T5,"AVG. SYLLABLES PER WORD =",T28,F8.2)
373    PRINT 106,F1
374     106 FORMAT(T5,"FLESCH INDEX =",T28,F8.2)
375    PRINT 107,F2
376    107 FORMAT(T5,"DALE INDEX =",T28,F8.2)
377     618 IF(F1.GE.70) GO TO 201
378     IF(F1.GE.60) GO TO 204
379     IF(F1.GE.50)GO TO 208

380     IF(F1.GE.-50) GO TO 210
381     GO TO 201
382     1327 CALL FRYE(S1,S2)
383     RETURN
384    108 FORMAT(T5,"GRADE LEVEL EQUIVALENT =",T28,F8.2)
385    201 X=G1
386    GOTO220
387    204 X=G2
388    GOTO220
389    208 X=G3
390    GOTO220
391    210 X=G4
392     220 IFLCH=IFLCH+1
393     FLCH(IFLCH)=X
394     IF(T.EQ."NOTEXT")RETURN
395     PRINT 108 ,FLCH(IFLCH)
396     RETURN
397    END
398    SUBROUTINE CHANGE(TEXT,A,IBEG,LEN,N)
399    COMMON IEXT(2000),LP,IP100,NP,IREC,LASTP,ONESYL(174,10),IBE
400     COMMON CHAR
401     DIMENSION TEXT(2000),A(50)
402    DO 10 I=IBEG,N
403    IF(TEXT(I).NE." ") GO TO 15
404    10 CONTINUE
405     IBE=600
406     RETURN
407     15 IBEG=I
408    DO 20 I=IBEG,N
409    IF(TEXT(I).EQ." ") GO TO 25
```

```
410    20 CONTINUE
411    25 IEND=I-1
412    LEN=IEND-IBEG+1
413    K=1
414    DO 30 I=IBEG,IEND
415    A(K)=TEXT(I)
416    30 K=K+1
417    IBEG=IEND+1
418     33 RETURN
419    END
```

RC-8

FILE SYLLABLE (usually stored on disk)

SYLLABLE is referred to in program as logical file 11

(READ(11,)...

SYLLABLE is used by READTERM and READABILITY programs. The following are multisyllabic words which are so common that they count as only <u>one</u> syllable.

This file can be punched on data cards and read into memory everytime the program is run. See statement 10 of the READABILITY program listing.

1	ABOUT	51	CITY,	101	MOTHER,	151	TODAY,
2	ABOUT.	52	CITY.	102	MOTHER.	152	TODAY.
3	ABOUT,	53	CITIES	103	MOTHERS	153	TODAYS
4	ABOT.	54	CITIES,	104	MOTHERS,	154	TODAYS,
5	AFTER	55	CITIES.	105	MOTHERS.	155	TODAYS.
6	AFTER,	56	EVER	106	MYSELF	156	UNDER
7	AFTER.	57	EVER,	107	MYSELF,	157	UNDER,
8	AGAIN	58	EVER.	108	MYSELF.	158	UNDER.
9	AGAIN,	59	EVERY	109	NEVER	159	UPON
10	AGAIN.	60	EVERY,	110	NEVER,	160	UPON,
11	AGO	61	EVERY.	111	NEVER.	161	UPON.
12	AGO,	62	FAMILY	112	O'CLOCK	162	UNTIL
13	AGO.	63	FAMILY,	113	O'CLOCK,	163	UNTIL,
14	ALMOST	64	FAMILY.	114	O'CLOCK.	164	UNTIL.
15	ALMOST,	65	FAMILIES	115	ONLY	165	VERY
16	ALMOST.	66	FAMILIES,	116	ONLY,	166	WOMAN
17	ALONG,	67	FAMILIES.	117	ONLY.	167	WOMAN.
18	ALONG	68	FATHER	118	OPEN	168	YELLOW
19	ALONG.	69	FATHER.	119	OPEN,	179	YELLOW.
20	ALSO	70	FATHERS	120	OPEN.	170	YESTERDAY
21	ALSO,	71	FATHERS,	121	OTHER	171	YESTERDAY,
22	ALSO.	72	FATHERS.	122	OTHER,	172	YESTERDAY.
23	ALWAYS	73	FUNNY	123	OTHER.	173	YESTERDAYS
24	ALWAYS,	74	FUNNY,	124	OTHERS,	174	YESTERDAYS.
25	ALWAYS.	75	FUNNY.	125	OTHERS.		
26	ANOTHER	76	GOING	126	OVER		
27	ANOTHER,	77	GOING,	127	OVER,		
28	ANOTHER.	78	GOING.	128	OVER.		
29	ANY	79	HAPPY	129	PEOPLE		
30	ANY,	80	HAPPY,	130	PEOPLE,		
31	ANY.	81	HAPPY.	131	PEOPLE.		
32	ANYTHING	82	INTO	132	PRETTY		
33	ANYTHING,	83	INTO,	133	PRETTY,		
34	ANYTHING.	84	INTO.	134	PRETTY.		
35	AROUND	85	LITTLE	135	SECOND		
36	AROUND,	86	LITTLE,	136	SECOND,		
37	AROUND.	87	LITTLE.	137	SECOND.		
38	AWAY	88	MANY	138	SECONDS		
39	AWAY,	89	MANY,	139	SECONDS,		
40	AWAY.	90	MANY.	140	SECONDS.		
41	BECAUSE	91	MONEY	141	SEVEN		
42	BECAUSE,	92	MONEY,	142	SEVEN,		
43	BECAUSE.	93	MONEY.	143	SEVEN.		
44	BEFORE	94	MORNING	144	SEVENS		
45	BEFORE,	95	MORNING,	145	SEVENS,		
46	BEFORE.	96	MORNING.	146	SEVENS.		
47	BETTER	97	MORNINGS	147	SOMETHING		
48	BETTER,	98	MORNINGS,	148	SOMETHING,		
49	BETTER.	99	MORNINGS.	149	SOMETHING.		
50	CITY	100	MOTHER	150	TODAY		

Page D-1 (Data Cards Deck) was removed because of irreproducibility prior to the document's submission to the ERIC Document Reproduction Service.

OUTPUT FROM CARDS

REACABILITY ANALYSIS FOR: THE MIND TOCL.NEIL GRAHAM.

IN THE LATE THIRD GENERATION INTEGRATED CIRCUITS WERE ALSO USED FOR HIGH SPEED MEMORY, PROVIDING SOME COMPETITION FOR THE NOW LONG ESTABLISHED MAGNETIC CORE MEMORY. THE INTEGRATED CIRCUIT MEMORY IS CALLED "SEMICONDUCTOR MEMORY," SEMICONDUCTORS BEING THE SUBSTANCES FROM WHICH TRANSISTORS AND INTEGRATED CIRCUITS ARE MADE. THERE IS AT PRESENT (1975) NO AGREEMENT ON WHAT MAY CONSTITUTE A FOURTH GENERATION. BUT ONE DEVELOPMENT THAT, IN THE AUTHOR'S OPINION, MAY SOMEDAY BE REGARDED AS CHARACTERISTIC OF A FOURTH GENERATION IS THE LARGE-SCALE-INTEGRATED-CIRCUIT OR LSI. AN LSI "CHIP" WILL FIT ON THE TIP OF ONE'S FINGER (AFTER PACKAGING, IN THE PALM OF ONE'S HAND). YET IT CONTAINS THE EQUIVALENT OF THOUSANDS
YOU HAVE TYPED OVER 100 WORDS.PRINTOUT WILL BEGIN

****

FLESCH INDEX WITH 60 WORDS

****

NUMBER OF SENTENCES =	5.00
NUMBER OF WORDS =	104.00
NUMBER OF SYLLABLES =	183.00
AVERAGE SENTENCE LENGTH	20.80
AVG. SYLLABLES PER WORD	1.76
FLESCH INDEX =	36.86
DALE INDEX =	9.58
GRADE LEVEL EQUIVALENT	15.49

NO. CHARACTERS PER 100 WORDS IS 534.

****

FRYE WITHOUT LIST

****

NUMBER OF SENTENCES =	4.79
NUMBER OF WORDS =	100.00
NUMBER OF SYLLABLES =	179.00

OUTSIDE FRYE ENVELOPE

```
ON THE OTHER HAND, ONE STILL HAS TO WRITE ONE LINE OF ASSEMBLY
LANGUAGE FOR EACH MACHINE INSTRUCTION (MACROINSTRUCTIONS ARE AN
EXCEPTION TO THIS).  SO A LARGE PROGRAM WILL REQUIRE THOUSANDS OF LINES
OF ASSEMBLY LANGUAGE.  ALSO THE ASSEMBLY LANGUAGE PROGRAMMER MUST CONCERN
HIMSELF WITH THE INTERNAL DETAILS OF THE COMPUTER--WHICH INSTRUCTIONS CAN
OPERATE ON WHICH MEMORY REGISTERS, HOW MANY BITS CAN BE FETCHED FROM MEMORY
WITH A SINGLE INSTRUCTION, AND SO ON.  A PERSON WHO HAS A PROBLEM TO SOLVE,
AND KNOWS THE STEPS THAT MUST BE TAKEN TO SOLVE IT, MUST NEVERTHELESS
BECOME FAMILIAR WITH MANY OF THESE TECHNICALITIES BEFORE BEING ABLE
 TRANSMIT TILL EITHER OF . ! ? ; OR :
TO PROGRAM THAT SOLUTION IN ASSEMBLY LANGUAGE.
YOU HAVE TYPED OVER 100 WORDS.PRINTOUT WILL BEGIN


   ************************************

   FLESCH INDEX WITH 60 WORDS

   ************************************
   NUMBER OF SENTENCES =       4.00
   NUMBER OF WORDS =         112.00
   NUMBER OF SYLLABLES =     174.00
   AVERAGE SENTENCE LENGTH    28.00
   AVG. SYLLABLES PER WORD     1.55
   FLESCH INDEX =             46.98
   DALE INDEX =                9.04
   GRADE LEVEL EQUIVALENT     13.97
NO. CHARACTERS PER 100 WORDS IS     486.


   ************************************

   FRYE WITHOUT LIST

   ************************************
   NUMBER OF SENTENCES =       3.68
   NUMBER OF WORDS =         100.00
   NUMBER OF SYLLABLES =     155.00
   FRYE LEVEL EQUIVALENT=     12.


  READABILITY ANALYSIS FOR:THE MIND TOOL.NEIL GRAHAM.

         PASSAGES  FRY   FLESCH  ADJUSTED

             1      0.0    15.5      15.5
             2     12.0    14.0      14.0

   READABILITY LEVEL    14.7
   MEDIAN               14.7
   MEAN                 14.7
   STANDARD DEVIATION    1.1
```

SPECIAL OUTPUT

THE ADOPTION OF ANY SYSTEM OF EXTENSIVE SPELLING REFORM WOULD REQUIRE GOVERNMENTAL ACTION, PREFERABLY UNDERTAKEN JOINTLY BY THE UNITED STATES, GREAT BRITAIN, AND THE OTHER ENGLISH SPEAKING COUNTRIES. FIRST, A COMMISSION, PREFERABLY BUT NOT NECESSARILY INTERGOVERNMENTAL, SHOULD BE ESTABLISHED TO DECIDE WHICH OF THE PRESENTLY PROPOSED SYSTEMS OF SIMPLIFIED SPELLING IS THE BEST, OR TO DEVELOPE SOME BETTER AND SIMPLER ONE. FURTHERMORE, A STANDARDIZED PRONUNICIATION OF ALL WORDS WOULD HAVE TO BE ADOPTED; THEN A DATE SOME YEARS HENCE WOULD HAVE TO BE SELECTED, AT WHICH TIME THE NEW SYSTEM WOULD TAKE EFFECT. IF LETTERS ARE TO BE ADDED TO THE ALPHABET, NEW TYPEWRITERS WOULD HAVE TO BE
TRANSMIT TILL EITHER OF . ! ? ; OR :
ONSTRUCTED AND NEW TYPESETTING MACHINERY WOULD HAVE TO BE DEVELOPED.
YOU HAVE TYPED OVER 100 WORDS.PRINTOUT WILL BEGIN

****

FLESCH INDEX :NO LIST

****

```
         3 ADOPTION
         3 EXTENSIVE
         4 GOVERNMENTAL
         4 PREFERABLY
         4 UNDERTAKEN
         3 UNITED
         3 COMMISSION,
         4 PREFERABLY
         5 NECESSARILY
         6 INTERGOVERNMENTAL,
         3 ESTABLISHED
         3 PRESENTLY
         3 SIMPLIFIED
         3 DEVELOPE
         3 FURTHERMORE,
         3 STANDARDIZED
         5 PRONUNICIATION
         3 ADOPTED;
         3 SELECTED,
         3 ALPHABET,
         4 TYPEWRITERS
         3 CONSTRUCTED
         4 TYPESETTING
         4 MACHINERY
         3 DEVELOPED.
NUMBER OF SENTENCES =       5.00
NUMBER OF WORDS =         119.00
NUMBER OF SYLLABLES =     205.00
AVERAGE SENTENCE LENGTH    23.80
AVG. SYLLABLES PER WORD     1.72
FLESCH INDEX =             36.94
DALE INDEX =                9.58
GRADE LEVEL EQUIVALENT     15.47
FOX INDEX =                17.92
```

This is an example of an output which can be produced by "Readability" (punched card) with a listing of multisyllabic words and 6 tests: Flesch, Flesch with list, Fry, Fry with list, Dale, and Fog.

The existing program has been structured to avoid this format.

FLESCH INDEX WITH 60 WORDS

****

NUMBER OF SENTENCES =	5.00
NUMBER OF WORDS =	119.00
NUMBER OF SYLLABLES =	203.00
AVERAGE SENTENCE LENGTH	23.80
AVG. SYLLABLES PER WORD	1.71
FLESCH INDEX =	38.36
DALE INDEX =	9.50
GRADE LEVEL EQUIVALENT	15.26
FOG INDEX =	17.92

NO. CHARACTERS PER 100 WORDS IS 525.

****

FRYE INDEX WITH 60 WORDS

****

NUMBER OF SENTENCES =	4.27
NUMBER OF WORDS =	100.00
NUMBER OF SYLLABLES =	169.00

COLLEGE LEVEL ONLY

****

FRYE WITHOUT LIST

****

NUMBER OF SENTENCES =	4.27
NUMBER OF WORDS =	100.00
NUMBER OF SYLLABLES =	171.00

COLLEGE LEVEL ONLY

READTERM PROGRAM USED FOR TERMINALS

```
1    FILE          10=TRAP,UNIT=DISKPACK,AREA=10000,RECORD=23,BLOCKING=3(
2    FILE           8=SCALENOS,UNIT=DISKPACK,BLOCKING=30,RECORD=14
3    FILE       11=SYLLABLE,UNIT=DISKPACK,BLOCKING=30,RECORD=14
4    FILE       5(MAXRECSIZE=134 )
5    FILE         6(MAXRECSIZE=134)
6     COMMON TEXT(2000),LP,IP100,NP,IREC
7     COMMON LASTP
8     COMMON ONESYL(174,10)
9     COMMON IBE,CHAR
10    COMMON /BLOCK/FRY(100),FLCH(100),IFRY,IFLCH
11     COMMON/TEXT/T,NNN,FLTXT
12    DIMENSION DUM(140)
13    DIMENSION TITLE(140),ADJUST(100)
14    READ(11,11)((ONESYL(I,J),J=1,10),I=1,174)
15     FLTXT=0
16    NNN=1
17    PRINT 600
18    READ(5,60)T
19    IREC=134
20    600 FORMAT(" DO YOU WANT COMPLETE ANALYSIS OR JUST FINAL RESULTS"
21    *,".FOR COMPLETE STUDY TYPE TEXT OTHERWISE NOTEXT"/)
22    60 FORMAT(A6)
23    PRINT 78
24    READ(5,87)(TITLE(I),I=1,IREC)
25    78 FORMAT(" FOR DOCUMENTATION PURPOSES TYPE TITLE OF BOOK")
26    87 FORMAT(138A1)
27    PRINT 88,(TITLE(I),I=1,50)
28    444 IFRY=0
29    88 FORMAT(1X,"READABILITY ANALYSIS FOR: ",50A1//)
30    IFLCH=0
31    KT=0
32    1 IREC=134
33    REWIND 8
34    REWIND 11
35    11 FORMAT(10A1)
36    LINBUF=IREC
37    CHAR=0
38   NWORDS=0
39   IS=1
40     18 PRINT 888
41     395 READ(5,6,END=23)(DUM(I),I=1,IREC)
42     888 FORMAT(" ENTER TEXT")
43     PRINT 49,(DUM(I),I=1,IREC)
44     49 FORMAT(1X,134A1/" CORRECTIONS?  Y OR N"/)
45     READ(5,17)R
46     17 FORMAT(A1)
47     IF (R.EQ."Y")GO TO 18
48     K=0
```

File Scalenos & Syllable are enclosed.
Trap is a temporary disk file to store all passages read so that all these passages can be written sequentially when the entire analysis has been completed.

```
      CO 73 I=IS,LINBUF
      K=K+1
      73 TEXT(I)=DUM(K)
    TEXT(LINBU F+1)=" "
    LP=NP
      6 FORMAT(134A1)

      CALL WDSPER(NWORDS,IS,LINBUF+1)
      IF(NWORDS.GE.100) GOTO71
      IS=IS+IREC+1
      LINBUF=IS+IREC-1
      GO TO 18
      71 LP=NP
      L=1
      CALL SENTEN(LINBUF)
      WRITE(10=NNN,501)
      501 FORMAT(//)
      NNN=NNN+2
      DO 16 M=1,LINBUF/IREC
      WRITE(10=NNN,87)(TEXT(K),K=L,L+IREC-1)
      NNN=NNN+1
      16 L=L+IREC+1
      WRITE(10=NNN,44)
      NNN=NNN+7
      44 FORMAT(//T5,36("*")//T5,"FLESCH INDEX WITH 60 WORDS"//T5,36("*"))
      440 CALL READTE(TEXT,NP+1,0.,  1)
      CALL FRACSE(S1)
      CHAR=-6
      WRITE(10=NNN,46)
      NNN=NNN+7
      46 FORMAT(//T5,36("*")//T5,"FRYE WITHOUT LIST"//T5,36("*"))
      460 CALL READTE(TEXT,IP100,S1,0)
      74 KT=KT+1
      GOTO1
      33 FORMAT(" ",138A1)
      23 T1=0
      T3=0
      REWIND 10
      LLL=1
      IF(T.EQ."NOTEXT")GOTO400
      CO 3 I=1,1000
      IREC1=IREC
      READ(10=LLL,87,END=400)(DUM(I),I=1,IREC1)
      DO 160 I=1,10
      IF(DUM(I).NE." ")GOTO190
      160 CONTINUE
      IREC1=1
      GOTO161
      WRITE(6,33)(DUM(I),I=1,IREC1)
      190 CO165 I=41,52
      IF(DUM(I).NE." ")GOTO191
      165 CONTINUE
      IREC1=41
      GOTO161
      191 IREC1=138
      161 WRITE(6,33)(DUM(I),I=1,IREC1)
```

```
104      3 LLL=LLL+1
105      400 PRINT 103,(TITLE(I),I=1,50)
106      103 FORMAT(//1X," READABILITY ANALYSIS FOR:",130A1/)
107     PRINT 130
108     130 FORMAT(/T10,"PASSAGES",T20,"FRY",T26,"FLESCH",T34,"ADJUSTED"/)
109     DO 105 I=1,KT
110     IF(FRY(I).LT.0)GOTO105
111     AD=1.03*FRY(I)
112     IF(AD.LE.5) GOTO30
113     IF(AD.GT.5.AND.AD.LT.10)GOTO31
114     ADJUST(I)=FLCH(I)
115     GOTO32
116      30 IF(FRY(I).EQ.0)GOTO79
117      ADJUST(I)=AD
118      GOTO32
119      79 ADJUST(I)=FLCH(I)

120      GOTO32
121     31 ADJUST(I)=(AD+FLCH(I))/2
122     32 T2=T2+ADJUST(I)
123     T3=T3+1
124     PRINT 108,I,FRY(I),FLCH(I),ADJUST(I)
125     108 FORMAT(T10,I5,T19,F4.1,T26,F5.1,T34,F7.1)
126     105 CONTINUE
127     A1=T2/T3
128      DO 333 J=1,KT-1
129     K=J
130     DO 34 I=K+1,KT
131     IF(ADJUST(K).LE.ADJUST(I))GOTO34
132     K=I
133     34 CONTINUE
134      IF(KT.EQ.1)GOTO211
135     T=ADJUST(J)
136     ADJUST(J)=ADJUST(K)
137     ADJUST(K)=T
138      333 CONTINUE
139     J=KT/2
140     X=KT/2.
141     IF(J.NE.X)GOTO36
142     X=(ADJUST(J)+ADJUST(J+1))/2
143     GOTO37
144      36 X=ADJUST(J+1)
145      37 S=0
146      SQ=0
147      DO 247 I=1,KT
148      S=S+ADJUST(I)
149      247 SQ=SQ+ADJUST(I)**2
150      AV=S/KT
151      IF(KT.EQ.1)GOTO121
152      ST=SQRT((KT*SQ-S*S)/(KT*(KT-1)))
153      122PRINT 39,A1,X,AV,ST
154      39 FORMAT(/" READABILITY LEVEL   ",T21,F5.1/
155       *          " MEDIAN            ",T21,F5.1/
156       *          " MEAN              ",T21,F5.1/
157       *          " STANDARD DEVIATION ",T21,F5.1//////)
```

```
158    STOP
159     211 J=0
160     GO TC 36
161     121 ST=0
162     GOTO122
163     END
164     SUBRCUTINE WDSPER(NWORCS,IST,LAST)
165     COMMCN TEXT(2000),LP,IP100,NP,IREC
166     COMMCN LASTP
167     COMMCN ONESYL(174,10)
168     COMMCN IBE,CHAR
169     REAL L
170    ISTART= IST
171    6 DO 10 I=ISTART,LAST
172    IF(TEXT(I).NE." ") GO TC 15
173    1C CONTINUE
174    IF(I.EQ.LAST+1)GO TO 35
175     15 IBEG=I
176    DC 20 J=IBEG,LAST
177     L=TEXT(J)
178     IF(L.EQ.".".OR.L.EQ."!".OR.L.EQ."?".OR.L.EQ.";".OR.L.EC.":")NP=J
179    IF(TEXT(J).EQ." ")GOTO25
180    2C CONTINUE
181     IF(I.EQ.LAST+1)GCTO35
182     25 NWORDS=NWORDS+1
183     IF(NWORDS.EQ.100) GOTC84
184      33 ISTART=J

185    GC TO 6
186     84 IP100=J-1
187     LASTP=NP
188     GO TC 33
189    35 RETURN
190     END
191     SUBRCUTINE SENTEN(LINBUF)
192     DIMENSION  DUM(140)
193     COMMCN TEXT(2000),LP,IP100,NP,IREC
194     COMMCN LASTP
195     COMMCN ONESYL(174,10)
196     COMMCN IBE,CHAR
197     COMMCN      /TEXT/T,NNN,FLTXT
198     REAL L
199     IKP=LASTP+1
200     18 DC 10 I=IKP,LINBUF+1
201     L=TEXT(I)
202     IF(L.EQ.".".OR.L.EQ."!".OR.L.EQ.";".OR.L.EC.":".OR.L.EQ."?")GOTO24
203    1C CONTINUE
204    PRINT 6
205      6 FORMAT("  TRANSMIT TILL EITHER OF . ! ? ; OR :")
206     291 IKP=LINBUF+2
207     IC=IKP+IREC-1
208     LINBUF=IC
209     180 PRINT 99
210     99 FORMAT(" ENTER TEXT")
211     READ(5,5)(DUM(I),I=1,IREC)
212     PRINT 45,(DUM(I),I=1,IREC)
```

```
      READ(5,8)R
      IF(R.EQ."Y")GOTO180
      L=1
      DO 15 K=IKP,IC
      TEXT(K)=DUM(L)
   15 L=L+1
    5 FORMAT(134A1)
    1 TEXT(IC+1)=" "
   GO TO 18
   24 NP=I
      PRINT 7
    7 FORMAT(" YOU HAVE TYPED OVER 100 WORDS. "/
     *" TYPE NEXT PASSAGE OR IF YOU HAVE FINISHED TYPE ?END")
   RETURN
   45 FORMAT(1X,133A1/1X,"CORRECTIONS? Y OR N")
    8 FORMAT(A1)
   END
      SUBROUTINE FRACSE(S1)
      INTEGER CH(7)
      DATA CH/".","  ","?",":",";","!"/
      COMMON TEXT(2000),LP,IP100,NP,IREC
      COMMON LASTP
      COMMON ONESYL(174,10)
      COMMON IBE,CHAR
      COMMON/TEXT/T,NNN
      K1=LASTP+1
   K2=IP100+1
   K3=NP-1
      IWORDS=0
   CALL WDSPER(IWORDS,K1,K3)
      LWORDS=0
   CALL WDSPER(LWORDS,K1,K2)
   S1=LWORDS+1./IWORDS
      CHAR=0
      DO 10 I=1,IP100
      DO 5 J=1,7
      IF(TEXT(I).NE.CH(J))GOTO5

      GOTO10
   37 FORMAT(T5,"NO. CHARACTERS/100 WORDS",T28,F8.2)
    5 CONTINUE
   CHAR=CHAR+1
   10 CONTINUE
      IF(T.EQ."NOTEXT")RETURN
      WRITE(10=NNN,37)CHAR
      NNN=NNN+1
      RETURN
   END
      SUBROUTINE FRYE(S2,S1)
      COMMON DUM(3746),CHAR
      COMMON/BLOCK/FRY(100),FLCH(100),IFRY,IFLCH
      COMMON/TEXT/T,NNN
      DIMENSION SYAR(25)
      INTEGER G(25,33)
      REWIND 8
      REWIND 11
```

```
      DO 9 I=1,25
      READ(8,1)(G(I,J),J=1,33)
      9 CONTINUE
      1 FORMAT(33I2)
      READ(8,2)(SYAR(I),I=1,11)
      READ(8,2)(SYAR(I),I=12,25)
      2 FORMAT(14F4.0)
      IC=(S1-108)/2.+1.5
      IF(S2.LT.3.6.OR.S2.GT.25.OR.S1.LT.108.OR.S1.GT.172)GOTO 19
      51 FORMAT(T5,"OUTSIDE FRY ENVELOPE")
     DO 10 I=1,25
     IF(S2.GE.SYAR(I)) GO TO 10
      IF(ABS(S2-SYAR(I-1)).LT.ABS(S2-SYAR(I)))GOTO37
      IR=I
      GO TO 39
      37 IR=I-1
      GOTO39
     10 CONTINUE
      39 CONTINUE
      IF(I.EQ.26)IR=25
      IR=26-IR
      IGR=G(IR,IC)
      IFRY=IFRY+1
      FRY(IFRY)=IGR
     IF(IGR.GT.12)GOTO16
     IF(IGR.LT.1)GOTO17
      IF(T.EQ."NOTEXT")RETURN
      WRITE(10=NNN,6)IGR
      NNN=NNN+1
      6 FORMAT(T5,"FRYE LEVEL EQUIVALENT=",T28,F6.0)
      RETURN
      16 IF(T.NE."NOTEXT")PRINT 7
      RETURN
      17 FRY(IFRY)=0
      IF(T.EQ."NOTEXT")RETURN
      WRITE(10=NNN,51)
      NNN=NNN+1
      RETURN
      19 IFRY=IFRY+1
      FRY(IFRY)=0
      IF(T.EQ."NOTEXT")RETURN
      WRITE(10=NNN,51)
      NNN=NNN+1
      RETURN
     7 FORMAT("  COLLEGE LEVEL ONLY")
     8 FORMAT("  NO GRADE LEVEL")
     END
```

```
      SUBROUTINE READTE(TEXT,N,FRAC,FLAG)
      INTEGER V1(6),C1,P1(5),V
      DATA  P1,C1/".","?","!",":",";",",","/
      DATA V1/"A","E","I","O","U","Y"/
      DATA LB/" "/
      P=5
      IBE=0
      Z=0
```

```
323     S1=0
324     W1=0
325     S2=0
326     INTEGER TEXT(2000),A(50),LET(100),CAL(100,25)
327     COMMON IEXT(2000),LP,IP100,NP,IREC
328     COMMON LASTP,ONESYL(174,10),IBE
329     COMMON CHAR
330     COMMON/BLOCK/FRY(100),FLCH(100),IFRY,IFLCH
331     COMMON/TEXT/T,NNN
332      DO 64 J=1,30
333     DO 64 I=1,25
334     64 CAL(J,I)=LB
335     L=134
336    IBEG=1
337     77 FORMAT(I1)
338     9 CALL CHANGE(TEXT,A,IBEG,LEN,N)
339     IF(IBE .GT.500) GO TO 44
340    W1=W1+1
341    V=0
342    B=LEN
343     IF(A(B).NE.C1)GOTO51
344     B=B-1
345     GO TO 57
346     51 DO 55 I=1,P
347    IF(A(B).NE.P1(I)) GO TO 55
348    S1=S1+1
349    B=B-1
350    GO TO 57
351    55 CONTINUE
352    57 IF(B.GT.3)GO TO 53
353    V=1
354    GO TO 80
355    53 IF(.NOT.(A(B).EQ."D".AND.A(B-1).EQ."E"))GO TO 58
356     IF(A(B-2).EQ."T".OR.A(B-2).EQ."D")V=1
357    59  B=B-2
358    GO TO 60
359    58 IF(A(B).EQ."S".AND.A(B-1).EQ."E")GO TO 59
360    IF(A(B).EQ."E".AND.A(B-1).EQ."L") GO TO 62
361    60 IF(A(B).NE.V1(2)) GO TO 62
362    B=B-1
363    62 L=0
364    DO 70 I=1,B
365    DO 75 J=1,6
366    IF(A(I).NE.V1(J)) GO TO 75
367    IF(I.EQ.1)GO TO 78
368    L1=I-L
369     IF(L1.EQ.1)GO TO 91
370    78 V=V+1
371    71 L=I
372    GOTO70
373     91 IF(I.EQ.B)GO TO 71
374     DO 92 JK=1,6
375     IF(A(I+1).EQ.V1(JK))V=V+1
376     92 CONTINUE
377     GO TO 71
378    75 CONTINUE
```

```
379   70 CONTINUE
380    IF(V.GT.0)GO TO 109
381   V=1
382    80 S2=S2+V
383   IF(V.LT.3)GO TO 9
384    Z=Z+1
385    LET(Z)=V
386    DO 337 IT=1,LEN
387    337 CAL(Z,IT)=A(IT)
388   GO TO 9
389   109 IF(LEN.GT.10.OR.V.LT.2)GO TO80
390    IF(FLAG.EQ.2) GO TO 80
391    IF(CHAR.EQ.-6) GOTO80
392    DO 138 I=1,174
393   DO 139 J=1,LEN
394   IF(A(J).NE.ONESYL(I,J))GO TO 138
395   139 CONTINUE
396   V=1
397    GO TO 80
398   138 CONTINUE
399   GOTO80
400    44 S1=S1 +FRAC
401    IF(T.EQ."NOTEXT")GOTO617
402    WRITE(10=NNN,101)S1
403    NNN=NNN+1
404   101 FORMAT(T5,"NUMBER OF SENTENCES =",T28,F8.2)
405    WRITE(10=NNN,102)W1
406    NNN=NNN+1
407   102 FORMAT(T5,"NUMBER OF WORDS =",T28,F8.2)
408    WRITE(10=NNN,103)S2
409    NNN=NNN+1
410     103 FORMAT(T5,"NUMBER OF SYLLABLES =",T28,F8.2)
411    617 IF(FLAG.EQ.0)GO TO 1327
412   F3=W1/S1
413   F4=S2/W1
414   F1=206.835-F3*1.015-F4*84.6
415   F2=11.534-0.053*F1
416   G1=-(F1-150)/10.
417   G2=-(F1-110)/5.
418   G3=-(F1-93)/3.33
419   G4=-(F1-140)/6.66
420    IF(T.EQ."NOTEXT")GOTO618
421    WRITE(10=NNN,104)F3
422    NNN=NNN+1
423   104 FORMAT(T5,"AVERAGE SENTENCE LENGTH =",T28,F8.2)
424    WRITE(10=NNN,105)F4
425    NNN=NNN+1
426   105 FORMAT(T5,"AVG. SYLLABLES PER WORD =",T28,F8.2)
427    WRITE(10=NNN,106)F1
428    NNN=NNN+1
429    106 FORMAT(T5,"FLESCH INDEX =",T28,F8.2)
430    WRITE(10=NNN,107)F2
431    NNN=NNN+1
432   107 FORMAT(T5,"DALE INDEX =",T28,F8.2)
433    618 IF(F1.GE.70) GO TO 201
```

```
ENTER  TEXT
OF A  FOURTH GENERATION IS THE LARGE SCALE INTEGRATED  CIRCUIT OR LAST. AN LST "CHIP" WILL FIT ON
OF A FOURTH GENERATION IS THE LARGE SCALE INTEGRATED CIRCUIT OR LAST. AN LST "CHIP" WILL FIT ON
CORRECTIONS?  Y OR N

N

ENTER TEXT
(AFTER PACKAGING, IN THE PALM OF ONE'S HAND).YET IT CONTAINS THE EQUIVALENT OF THOUSANDS
(AFTER PACKAGING, IN THE PALM OF ONE'S HAND).YET IT CONTAINS THE EQUIVALENT OF THOUSANDS
CORRECTIONS?  Y OR N

YOU HAVE TYPED OVER 100 WORDS.
TYPE NEXT PASSAGE OR IF YOU HAVE FINISHED TYPE ?END
ENTER TEXT
ON THE OTHER HAND, ONE STILL HAS TO WRITE ONE LINE OF ASSEMBLY LANGUAGE FOR EACH MACHINE
ON THE OTHER HAND, ONE STILL HAS TO WRITE ONE LINE OF ASSEMBLY LANGUAGE FOR EACH MACHINE
CORRECTIONS?  Y OR N

ENTER TEXT
N
N
CORRECTIONS?  Y OR N

N
ENTER TEXT
ARE AN EXCEPTION TO THIS). SO A LARGE PROGRAM WILL REQUIRE THOUSANDS OF LINES OF ASSEMBLY LANGUAGE.
ARE AN EXCEPTION TO THIS). SO A LARGE PROGRAM WILL REQUIRE THOUSANDS OF LINES OF ASSEMBLY LANGUAGE.
CORRECTIONS?  Y OR N

N
ENTER TEXT
MUST CONCERN HIMSELF WITH THE INTERNAL DETAILS OF THE COMPUTER WHICH, WHEN INSTRUCTIONS CAN OPERATE
MUST CONCERN HIMSELF WITH THE INTERNAL DETAILS OF THE COMPUTER WHICH, WHEN INSTRUCTIONS CAN OPERATE
CORRECTIONS?  Y OR N

N
ENTER TEXT
HOW MANY BITS CAN BE FETCHED FROM MEMORY WITH A SINGLE INSTRUCTION, AND SO ON. A PERSON WHO HAS A
HOW MANY BITS CAN BE FETCHED FROM MEMORY WITH A SINGLE INSTRUCTION, AND SO ON. A PERSON WHO HAS A
CORRECTIONS?  Y OR N

ENTER TEXT
N
N
CORRECTIONS?  Y OR N

N
ENTER TEXT
THE STEPS THAT MUST BE TAKEN TO SOLVE IT, MUST NEVERTHELESS BECOME FAMILIAR WITH THE MANY
THE STEPS THAT MUST BE TAKEN TO SOLVE IT, MUST NEVERTHELESS BECOME FAMILIAR WITH THE MANY
CORRECTIONS.  Y OR N

N
TRANSMIT TILL EITHER OF . ± ? ; OR :
ENTER TEXT
TO PROGRAM THAT SOLUTION IN ASSEMBLY LANGUAGE.
TO PROGRAM THAT SOLUTION IN ASSEMBLY LANGUAGE.
CORRECTIONS?  Y OR N
N
YOU HAVE TYPED OVER 100 WORDS.
TYPE NEXT PASSAGE OR IF YOU HAVE FINISHED TYPE ?END
?END
$#
ENTER TEXT
```

```
434     IF(F1.GE.60) GO TO 204
435     IF(F1.GE.50)GO TO 208
436     IF(F1.GE.-50) GO TO 210
437     GO TO 201
438     1327 CALL FRYE(S1,S2)
439     RETURN
440    108 FORMAT(T5,"GRADE LEVEL EQUIVALENT =",T28,F8.2)
441    201 X=G1
442    GOTO220
443    204 X=G2
444    GOTO220

445    208 X=G3
446    GOTO220
447    210 X=G4
448     220 IFLCH=IFLCH+1
449     FLCH(IFLCH)=X
450     IF(T.EQ."NOTEXT")RETURN
451     WRITE(10=NNN,108)FLCH(IFLCH)
452     NNN=NNN+1
453     RETURN
454    END
455    SUBROUTINE CHANGE(TEXT,A,IBEG,LEN,N)
456    COMMON IEXT(2000),LP,IP100,NP,IREC,LASTP,ONESYL(174,10),IBE
457     COMMON CHAR
458     DIMENSION TEXT(2000),A(50)
459    DO 10 I=IBEG,N
460    IF(TEXT(I).NE." ") GO TO 15
461    10 CONTINUE
462     IBE=600
463     RETURN
464     15 IBEG=I
465    DO 20 I=IBEG,N
466    IF(TEXT(I).EQ." ") GO TO 25
467    20 CONTINUE
468    25 IEND=I-1
469    LEN=IEND-IBEG+1
470    K=1
471    DO 30 I=IBEG,IEND
472    A(K)=TEXT(I)
473    30 K=K+1
474    IBEG=IEND+1
475     33 RETURN
476    END
```

IN THE LATE THIRD GENERATION INTEGRATED CIRCUITS WERE ALSO USED FOR HIGH SPEED MEMORY,
PROVIDING SOME COMPETITION FOR THE NOW LONG ESTABLISHED MAGNETIC CORE MEMORY. THE INTEGRATED
CIRCUIT MEMORY IS CALLED SEMICONDUCTOR MEMORY, SEMI CONDUCTORS BEING THE SUBSTANCES FROM WHICH
N
TRANSISTORS AND INTEGRATED CIRCUITS ARE MADE. THERE IS AT PRESENT (1975) NO AGREEMENT ON WHAT MAY
CONSTITUTE A FOURTH GENERATION. BUT ONE DEVELOPMENT THAT, IN THE AUTHOR'S OPINION, MAY SOMEDAY BE
REGARDED AS CHARACTERISTIC OF A FOURTH GENERATION IS THE LARGE SCALE INTEGRATED CIRCUIT OR LIST. AN
LST "CHIP" WILL FIT ON THE TOP OF ONE'S FINGER (AFTER PACKAGING, IN THE PALM OF ONE'S HAND). YET IT
CONTAINS THE EQUIVALENT OF THOUSANDS

****

FLESCH INDEX WITH 60 WORDS

****

NUMBER OF SENTENCES =	5.00
NUMBER OF WORDS =	106.00
NUMBER OF SYLLABLES =	184.00
AVERAGE SENTENCE LENGTH	21.20
AVG. SYLLABLES PER WORD	1.74
FLESCH INDEX =	38.46
DALE INDEX =	9.50
GRADE LEVEL EQUIVALENT	15.25
NO. CHARACTERS/100 WORD	528.00

****

FRYE WITHOUT LIST

****

NUMBER OF SENTENCES =	4.68
NUMBER OF WORDS =	100.00
NUMBER OF SYLLABLES =	178.00

OUTSIDE FRY ENVELOPE

All of this would not be listed if NOTEXT had been typed at the start of the session.

ON THE OTHER HAND, ONE STILL HAS TO WRITE ONE LINE OF ASSEMBLY LANGUAGE FOR EACH MACHINE INSTRUCTI
N
ARE AN EXCEPTION TO THIS). SO A LARGE PROGRAM WILL REQUIRE THOUSANDS OF LINES OF ASSEMBLY LANGUAGE
ALSO THE ASSEMBLY PROGRAMMER MUST CONCERN HIMSELF WITH THE INTERNAL DETAILS OF THE COMPUTER WHICH,
WHEN INSTRUCTIONS CAN OPERATE ON WHICH MEMORY REGISTERS HOW MANY BITS CAN BE FETCHED FROM MEMORY
WITH A SINGLE INSTRUCTION, AND SO ON. A PERSON WHO HAS A PROBLEM TO SOLVE, AND KNOWS
N
THE STEPS THAT MUST BE TAKEN TO SOLVE IT, MUST NEVERTHELESS BECOME FAMILIAR WITH THE MANY TECHNI-
CALITIES BEFORE BEING ABLE TO PROGRAM THAT SOLUTION IN ASSEMBLY LANGUAGE.

****

FLESCH INDEX WITH 60 WORDS

****

NUMBER OF SENTENCES =	4.00
NUMBER OF WORDS =	114.00
NUMBER OF SYLLABLES =	175.00
AVERAGE SENTENCE LENGTH	28.50
AVG. SYLLABLES PER WORD	1.54
FLESCH INDEX =	48.04
DALE INDEX =	8.99
GRADE LEVEL EQUIVALENT	13.81
NO. CHARACTERS/100 WORD	474.00

****

OT- 4

FRYE WITHOUT LIST

****

NUMBER OF SENTENCES = 3.63
NUMBER OF WORDS = 100.00
NUMBER OF SYLLABLES = 153.00
FRYE LEVEL EQUIVALENT = 12.

READABILITY ANALYSIS FOR:THE MIND TOOL. NEIL GRAHAM

PASSAGES	FRY	FLESCH	ADJUSTED
1	0.0	15.2	15.2
2	12.0	13.8	13.8

READABILITY LEVEL 14.5
MEDIAN 14.5
MEAN 14.5
STANDARD DEVIATION 1.0

CORRECTIONS: 1 VR "

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